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MARCH 1941

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BUTANE-PROPANE

News

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CONGRATULATIONS

and

BEST WISHES

to the

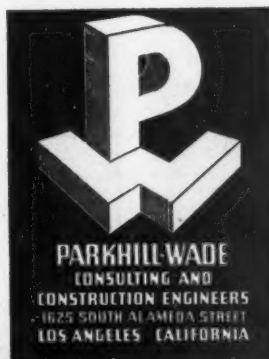
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and Members*

on the occasion of its

ANNUAL CONVENTION

PALMER HOUSE * FEBRUARY 24-25 * CHICAGO



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LETTERS

- **BUTANE-PROPANE News** welcomes communications from those identified with the liquefied petroleum gas industry, but readers will understand that this magazine does not necessarily concur in personal opinions so expressed.—Editor.

Gentlemen:

What would you think of running a "Shop Kink" department in BUTANE-PROPANE News, with contributions coming from actual workers rather than from technicians and executives? I know that many men have developed "short-cut devices" that are not patentable nor commercial in value, yet are helpful in performing numerous service and shop operations. Surely they would share such ideas with your readers.

MARK ANTON

Suburban Gas Company
Livingston, New Jersey

We like the suggestion and will pay \$2 each for all "operating kinks" used, providing enough are received to justify establishing such a department. What original ideas have you for doing any job in the LP-Gas industry in a safer, cheaper, better way? When you submit them to us, give your name, your official position and company affiliation, and your address.—Ed.

Gentlemen:

The school officials near us are investigating heating equipment as they plan to install a complete system in the public schools here, in the near future.

We are figuring with them on an LP-Gas installation and would appreciate it very much if you could furnish us with a list of schools and similar institutions that are using liquid petroleum gas for heating.

W. C. E.

Florida

Schools that we know of that installed LP-Gas during 1940 for heating or water heating or cooking or all three of those services, and which were reported in the columns of Butane-Propane News, are:

Arkansas: Gillham.

California: San Joaquin, Clovis (Union high school), Vista (high school), Solvang (Danish church gymnasium.)

Indiana: Terre Haute (Indiana State Teachers College).

Oklahoma: Washington, Cordell, Norman, Pond Creek, Arnold View (15 miles northwest of Purcell), Hillsdale, Wyandotte (Seneca Indian school), Greenfield, Marland (101 Ranch

—National Youth Administration), Ron (Harmon county), Tahlequah (Northwestern State Teachers College), Vici.

Texas: Avalon, Keller.—Ed.

Gentlemen:

We have just recently gone into the butane business. Your magazine is quite a help to us. Our city is framing an ordinance regarding butane and we have no idea at present as to how severe it will be. Are there sources within the liquefied petroleum gas industry from which help can be obtained in aiding municipal authorities in framing ordinances fair to the industry and the public, alike?

H. J. S.

California

The Liquefied Petroleum Gas Association, 11 West 42nd St., New York City, will be very glad to do anything it can to enlighten your council members and to suggest to them the forms of ordinances which other cities have adopted and which have worked out satisfactorily for both the industry and the protection of the public.—Ed.

Gentlemen:

I am attaching another subscription to Butane Propane News as I find I can never keep our office copy handy because of others reading it, and will have to have a private copy out at my house if I intend to get it read within the month.

A. T. S.

Oklahoma

Many a subscriber seems to have this trouble, and your solution is the best one we know.—Ed.

Gentlemen:

We would like to know if you have any information available regarding the use of butane or isobutane gas for welding and cutting.

C. N. A.

Pennsylvania

In the August issue of BUTANE-PROPANE News appeared a very informative article on flame cutting with propane, and this subject has been additionally covered in earlier issues. Butane, isobutane and propane are not commonly used for welding but are becoming increasingly in demand for cutting, metalizing and many other industrial operations.—Ed.

USE OUR RESEARCH DEPARTMENT

The BUTANE-PROPANE News technical staff will gladly endeavor to answer all legitimate inquiries (except legal and financial) about the LPG industry which regular subscribers submit.—Editor.

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FEATURES

- Attractive Appearance
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WRITE FOR BULLETIN NO. 311

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INDIANAPOLIS, IND.



J. WOODWARD MARTIN
Our Guest Editor for March

A Clear Road Ahead

By J. WOODWARD MARTIN

Lone Star Gas Company, Dallas, Texas

FUNDAMENTALLY speaking, this LP-Gas business, this business of providing gas service without extensive pipe distribution systems, is sound.

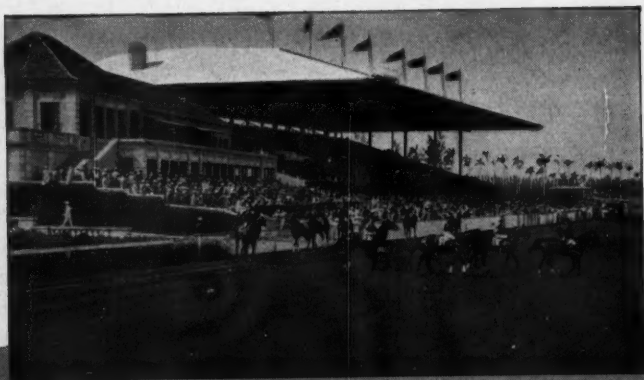
The present known supply of LP-Gas is just as dependable and available as natural gas and petroleum products of all kinds, and is estimated at 33 times present requirements. These estimates do not take into account such potential sources as the reforming of crude oils, natural gases, and coals to produce LP-Gas as the major product.

This business requires less investment per customer in equipment to provide service than does older gas services. The life of such equipment, where aboveground types are used, will probably exceed that of buried pipe lines and incur less maintenance expense. All investment can be on private property and not confronted with paving, lowering, street or road grading, or moving problems such as surround buried lines in streets and alleys. The equipment is portable and can be moved as customers move, even as population centers change.

The past few years have demonstrated that LP-Gas services are readily acceptable. LP-Gas customers have just as much money invested in gas appliances of equal convenience and performance as those for other gas services if sold at the same rates.

As an industrial fuel, LP-Gas is suitable for any gas application and even now is competitive with some types of older gas services. It is producing new industrial gas revenues of its own.

Fundamentally the LP-Gas business is limited only to the ingenuity and husbandry of those engaged in it.



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METER COMPANY
INCORPORATED (ESTABLISHED 1926)



MAINLY BEYOND THE MAINS

FIGHT WITH FACTS

As dealers and distributors in LP-Gas evidence their appreciation of the need for closer cooperation within the industry by organizing an ever-increasing number of local associations and by swelling the ranks of their national organization, it is worth repeating that there are two essential activities that should be on the agenda of every group that proposes to function for the good of its members and the industry as a whole.

First of all, a system, elementary though it may have to be, should be set up for the gathering and clearing of statistical information on the growth of LP-Gas usage for residential, commercial and industrial purposes and, second, some individual or a special committee in every organization should be responsible for the release of information on the industry in the form of publicity, written and placed where it will be of the greatest benefit to all.

Misapprehensions and false impressions regarding LP-Gas are conceived in ignorance of its very essentials. And all too often this ignorance is fostered and even embellished by untruths promulgated by those who regard the industry as menacing competition. Only the clear light of facts, well presented, can purge the dark corners of the shady figures of venal misrepresentation.

COMPETITIVE, NOT COOPERATIVE

It seems about time to put the ice pack of realism on the fevered brows of some of our editorial writers and orators who are warming up to the theme of cooperation between the LP-Gas industry and the gas utilities. Between LP-Gas and natural gas we can see pos-

More Than 4000 Copies This Issue

sibilities of a closer liason, since the two fuels are not competitive, and since many of the problems of one industry are the problems of the other. But as far as the manufactured gas companies are concerned, and more particularly the manufactured gas companies that are serving both gas and electricity, it is sheer wishful-thinking to attempt to identify in a situation that is destined to become increasingly competitive any strong community of interest between these utilities and the independent dealers and distributors of butane and propane.

In the first place, liquefied petroleum gas is a fuel greatly superior to manufactured gas, just as pure natural gas is also a superior fuel. And in many areas in the United States butane or propane are already available to the consumer at a price that on a B.t.u. basis alone makes them competitive to manufactured gas. There are localities in which residential heating is being converted from manufactured to LP-Gas. Many important industrial and commercial installations have been changed over, with every indication that more will follow.

It is a painful experience for a manufactured gas utility to see any part of its load thus slipping away, even though it may well be highly satisfying and economical to the customer. Equally distressing to the electrical departments of some of these same utilities is the rapid growth of LP-Gas in the rural areas where their electric lines, but not their gas mains, reach. For it has long been patent that the electrical industry has regarded rural America as its own private hunting preserve, laid out and fenced in and awaiting exploitation at the industry's leisure.

We do not counsel rash and uneconomic raids on the customers of manufactured gas utilities by LP-Gas dealers. On the contrary we have repeatedly cautioned against any activity that might be regarded as an invitation to cut throat competition. The market in homes and establishments not now served by any form of gas is so vast that it is only sound business to adopt the policy of developing that market first. But in its development let us never lose sight of the fact that we are building an industry of our own; and its function is to best serve the public, and not to act as either handmaiden or advance agent for utility gas main extensions.

Characteristics of LP-Gas

That Affect Its Fire Hazard

By M. B. ANFENGER and O. W. JOHNSON

*Standard Oil Company of California

A GOOD way to get an idea of the characteristics of liquefied petroleum gas is to compare it with similar substances with which we are familiar. Liquefied petroleum gas is a liquid, and it is a fuel. We will, therefore, compare it with some common liquids and some common fuels.

At the outset, let us recognize two things: (1) Any liquid can cause an explosion; (2) Any fuel can cause an explosion.

If these statements are correct, we can see that liquefied petroleum gas, being both a liquid and a fuel, can cause an explosion in two different ways. This is true of any liquid fuel.

Let us briefly investigate the possibility of liquids causing explosions. If we heat water in a closed vessel provided with a pressure gage (Fig. 1), we see that a pressure develops. This is called "vapor pressure." At ordinary temperatures the vapor pressure of water is low, but as the temperature increases the pressure becomes greater. At 212° the vapor pressure



M. B. ANFENGER and O. W. JOHNSON

of water becomes equal to that of the atmosphere. If the temperature is raised above 212°, we can read the pressure on the pressure gage. If heating is continued, and if there is not a relief valve of adequate size on the container, an explosion will result. This is called a boiler explosion. It would not be wise to continue heating until the vessel explodes, but we can easily demonstrate the same thing at low pressure by heating water in a corked test tube (Fig. 2). As soon as the water reaches 212° the vapor pressure will be equal to atmospheric pressure. As heating is continued

*A paper delivered at Bakersfield, Calif., Jan. 31 before the fire training school of the Bureau of Trade and Industrial Education of the California State Department of Education. Published herewith is the first half of the paper. The second portion will appear in the April issue.

the pressure will rise slightly and the cork will be blown out. If the cork had not been provided to give pressure relief, the pressure would rise until the tube burst.

Let us now consider butane as a

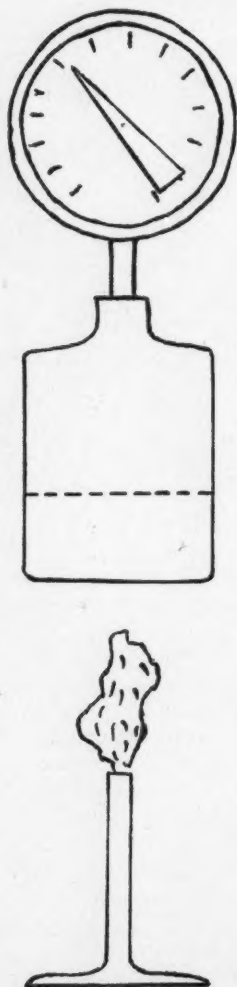


Fig. 1

liquid similar to water. The pressure gage on a cylinder of butane at room temperature would read about 60 lb. per sq. in. (Fig. 3). If the temperature were raised, the pressure would rise, just as when water is heated, but instead of the pressure being atmospheric at 212°, the vapor pressure of butane would be around 200 lb. per sq. in. The only difference in the behavior is that the vapor pressure of butane is much higher than that of water.

If we open a valve at the top of the butane cylinder, vapor will escape, the pressure will be reduced, and the liquid will boil. If not under pressure, butane will boil at a temperature around 30°F. If we open a valve below the liquid level, liquid butane will run out, and some of the liquid can be caught in a test tube. The evaporation of some of the butane refrigerates the remainder to below 30°F., and we now have butane liquid at atmospheric pressure. If a cork is placed in test tube, the butane will behave just as the water did, except that it will not be necessary to heat it with a flame. Heat from the air, or from the hand, will cause it to boil, and the cork will be blown out.

It is thus seen that containers of liquefied petroleum gas are susceptible to boiler explosions just the same as steam boilers, and it is largely for this reason that the pressure vessel division of the Industrial Accident Commission, which regulates steam boiler installation in the State of California, is now regulating liquefied petroleum gas installations to the extent of its jurisdiction. All vessels containing liquefied petroleum gas

must be of proper design and construction, and must be safeguarded against excessive pressures, just the same as a steam boiler. So much for the present regarding boiler explosions.

Let us now develop the facts about any fuel being able to produce an explosion. If a flame is applied momentarily to several common fuels—natural gas, wood, coal, kerosene, Stoddard solvent, gasoline, and butane—we observe that the gases are very easy to ignite, but that the only liquid which caught fire is the gasoline. Careful examination will show that when gasoline burns the flame does not originate at the surface of the gasoline, but is always some distance above it, as shown in Figure 4. Actually, gasoline does not burn—it is the vapor given off by the gasoline which burns. This is true not only of gasoline, but of almost all other solid and liquid fuels; they

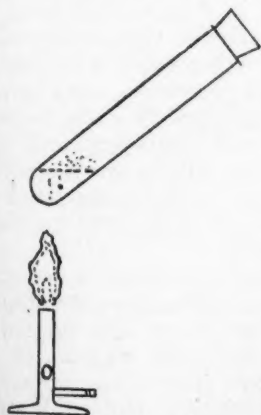


Fig. 2

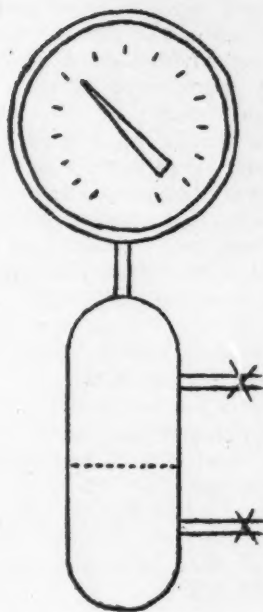


Fig. 3

must be in vapor form before they will burn.

Kerosene did not ignite when the flame was applied because the vapor pressure of kerosene is so low that at ordinary temperatures there is insufficient vapor being given off to burn. A little kerosene on a wick or card ignites readily, because the flame almost immediately heats the kerosene and raises its vapor pressure so that it gives off enough vapor to burn. If we heat some kerosene in a pan, its vapor pressure will thus be raised, and it will then ignite as readily as gasoline.

Solid fuels also usually must first be converted into a vapor before they will burn. If wood is heated in a test tube, it will vaporize and

the vapor given off can be burned at the end of the tube (Fig. 5).

Finely divided solid fuel burns readily when exposed to a flame, just the same as the kerosene burned readily on a card when a relatively large surface of the kerosene was exposed to a flame. Flour, coal dust, and other similar materials suspended in air are easily ignited. Even steel, although it is not a common fuel, will burn if finely divided. If a wad of fine steel wool is highly heated it will continue to burn in the air.

When a flame was applied to the fuels, you saw that none of them burned fast enough to produce explosions when ignited in the open. However, it was observed that those fuels in the form of vapor, or those finely divided burned much faster than the others.

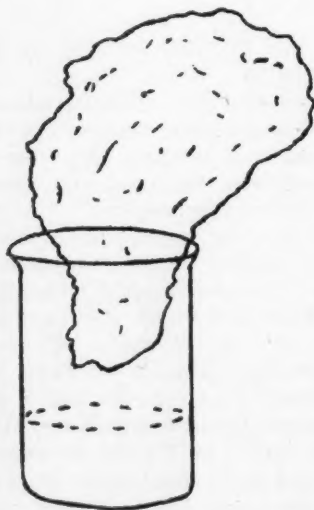


Fig. 4

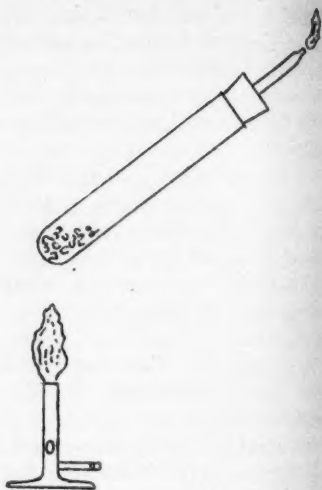


Fig. 5

We will now investigate the effects of burning some vaporized gasoline in a closed space. A few drops of gasoline will be placed in a lucite tube having a spark plug at one end (Fig. 6). If the tube is corked and allowed to stand for a few moments, evaporation and diffusion will provide a uniform mixture of gasoline vapor and air. When a spark is made to pass between the points the cork will be blown out with a sharp report. The expansion of the gases when burning developed pressure and blew out the cork.

Why did no explosion result when the gasoline vapor in the open beaker in the room was ignited? Because the small amount of vapor released from the beaker was not sufficiently confined. Therefore, practically no pressure could build

up. If there were sufficient vapor in the room, with enclosing walls to confine it, an explosion would result when the gases burned.

We will now go to a larger container and attempt to make an explosion with another fuel—this time natural gas. A large glass cylinder provided with a paper cover (Fig. 7) is so arranged that the proper proportions of natural gas can be mixed with air. A knife switch has been placed in the cylinder instead of a spark plug. When the switch is opened the arc produced is sufficient to ignite the natural gas. Burning in this confined space develops pressure and bursts the paper cover.

With suitable equipment we could explode wood vapor or kerosene vapor as well as natural gas. Probably everyone in the fire service is

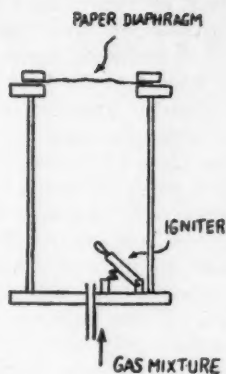


Fig. 7

familiar with so-called smoke explosions. These are simply the ignition of gases developed from heated wood and other combustibles. When these vapors accumulate in a room or other confined space, and are ultimately reached by the flames, an explosion may result if conditions are right. When the California Building on Treasure Island burned a few months ago there was an explosion from this cause. It was quite sharp, but fortunately was not of sufficient violence to cause injuries to the many firemen working on the building at the time it occurred. A different proportion of gas and air could have produced a much worse explosion.

A few minutes ago we spoke of proper proportions of air and gas. We all know that air is necessary for combustion, but possibly it is not always realized just how large the proportion of air must be. When the explosion was produced in the lucite tube you will remember that

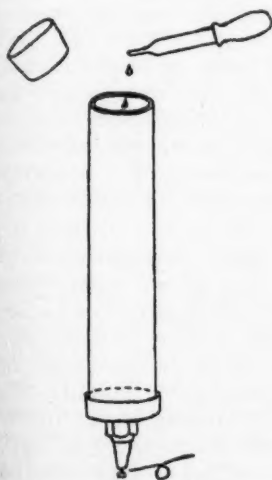


Fig. 6

only a drop or two of gasoline was placed in the tube. Now the experiment will be repeated, using several drops of gasoline. No explosion occurs because the evaporation of the gasoline displaced some of the air, and there was not enough air left to produce combustion in the tube. If the stopper is removed to let in more air, the mixture can be ignited as it obtains sufficient air.

Experiments have shown that at least 94% of air must be present in a gasoline vapor-air mixture before combustion can occur. This means that there must not be more than 6% of vapor present. It has also been learned that there must be at least 1.3% of gasoline vapor in a vapor-air mixture before the mixture will ignite. Therefore we can say that the explosive range for gasoline is between 1.3% and 6% of gasoline vapor.

The meaning of the expression "Explosive Range" is shown by the illustration of a beaker of gasoline

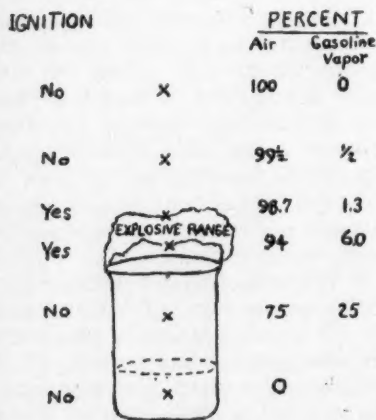


Fig. 8

(Fig. 8). A foot above the beaker you will see the notation that there is no gasoline vapor present—that is, there is 100% air. Right above the surface is written 75% air and 25% gasoline vapor. (It is assumed that this is ordinary motor gasoline and that the vapor pressure is such that 25% vapor will be given off before air becomes saturated and will hold no more.) Between the location where there is no gasoline vapor and the gasoline surface where there is 25% gasoline vapor, there will be a gradation of mixtures between these two amounts. Let us now take a spark plug and see what happens when we produce sparks at different locations around a beaker of gasoline. As indicated in the figure, no fire results when we are well above the gasoline surface, because there is not enough vapor present. No fire results when a spark is produced below the gasoline surface, because there is no air present. There is still not enough air present immediately above the surface. As the spark is raised we finally find, near the top of the beaker, the mixture that contains the proper proportion of vapor and air for combustion to occur.

We have learned from experiment that as we go up from the surface no ignition can occur until we have at least 94% of air. This means there is less than 6% of gasoline vapor present. We also know that when we get higher than the level where there is only 1.3% vapor, we get no ignition. The zone between these two proportions is called the explosive or combustible range.

LP-GAS FOR THE ARMY!

By KEITH LAMONT

Parkhill-Wade, Los Angeles

IT WAS Napoleon who said, "An army marches on its stomach."

With this statement concerning the tactical value of morale, Uncle Sam more than concurs, for it is his determination that not only shall his fighting men be the best fed with well-prepared food, but he goes further and says they shall also be comfortably housed in warmth and quartered with the modern, homelike conveniences.

To provide these at Camp Haan, the new U. S. Army Anti-Aircraft Firing Center near March Field in California, the Government has called for LP-Gas to play an important role in the National Defense Program with the installation of what is considered to be one of the finest, most modern, soundly engineered and constructed gas distribution systems yet fabricated. Thus, when mess call is sounded, meat-on-the-table will be thoroughly cooked by LP-Gas while space heating and water heating for the whole project with the exception of the hospital area, likewise will be fueled by the system.



KEITH LAMONT

The system will use propane supplied by a plant having six 15,000-gallon, 175 lbs. per sq. in. working pressure API-ASME code storage tanks with a combined capacity of 90,000 gallons, gross. The plant is designed to handle an average load of 7000 gallons of propane per day throughout the year, which is the equivalent of approximately 630,000 cubic feet of natural gas.

Anticipating future extension of natural gas lines to the March Field area, the plant is so designed that it can easily be converted to a standby for natural gas when this occurs. The plant is entirely automatic in operation and duplicate main operating equipment is installed to assure continuous, uninterrupted operation and service at all times under all circumstances.

Main Liquid Phase Circuit

Liquid propane is drawn from any or all of the six tanks through an expansion valve to a brine cooler circuit which refrigerates a cold storage room to an extent equal to 10 tons of ice refrigeration per day, then through a tube and shell vaporizer and surge tank to assure complete vaporization and constant temperature. Downstream of the vaporizer this circuit joins the vapor phase line before passing into the metering manifold.

A feature of the liquid phase circuit is provision for automatically by-passing the refrigeration unit. This by-pass is installed so that the refrigeration unit may cut out of service at any time when refrigeration is not needed and provide continuous service and feed to the gas distribution system in case any difficulty is experienced in the refrigeration unit. In either instance, liquid is then introduced direct from the storage tanks into the vaporizer and the balance of the circuit then remains the same.

Vapor Phase

Should the liquid phase become inoperative for any reason, an automatic vapor by-pass brings vapor from the top of the tanks direct to the metering manifold. When the liquid phase again goes into service, this vapor phase by-pass automatically closes.

The plant is designed to take tank car loads of propane and a compressor is employed in the transfer of fuel from tank car to storage tanks, the transfer being accomplished by the pressure differential method. In the filling operation, vapor is drawn off from the top of the storage tanks, passed through the compressor into the top of the tank car, forcing the liquid from the car through the filling line into the storage tanks. When the liquid in the tank car is exhausted, manifolding is provided to reverse the flow and withdraw all residual vapors from the tank car, completing the transfer operation.

In the design of this plant safety was a prime consideration and all

code requirements were complied with.

Safety valves are provided for each storage tank and for each piece of operating equipment such as vaporizers, compressors, etc., while relief valves are installed at all points on the lines where valves may inadvertently be shut off in a manner which may trap liquid or cause excessive pressure. Valve pits for tank valves are covered with a steel door gasketed for vapor tightness and the pits are vented to atmosphere through a common stack. All safety valves, relief valves, pit vents and blow-down lines discharge into this common stack comprised of a 12 inch pipe, 30 feet high.

Safety Devices

As a precaution against carry-over of liquid to the distributing main, in the event of inadequate steam supply or stoppage in the vaporizer, an automatic high liquid-level shut-off is installed on each of the vaporizers. This device operates and returns the vaporizer to service at such time as the difficulty is corrected or the obstruction cleared. Meanwhile service to the distributing main is supplied by the previously mentioned vapor phase circuit which automatically goes into operation. A low pressure cut-off is provided at the distributing main head. Before entering the distributing main, vapors are metered through a battery of meters.

Typical of the high character of construction and material employed in the building of this plant, steel valves of at least 250 lbs. per sq. in. working pressure are used

throughout up to the meter manifold where semi-steel valves are installed, since this area operates on low-pressure gas. Pipe fabrication is flanged in sizes of 1½ inch, or larger, while steel threaded fittings are used in sizes less than 1½ inch.

The propane plant was engineered and designed by Parkhill-Wade, consulting and construction engineers, Los Angeles, with R.

Keith Lamont in charge. The entire project was under direct supervision of Kenneth H. Newton, Captain, QMC, constructing quartermaster, representing the office of the Quartermaster General.

The general contractor on the camp project was P. J. Walker & Co., Los Angeles; the architect engineer was Lippincott and Bowen, Los Angeles, with C. D. Walz, chief mechanical and electrical engineer.

City Luxury on the Farm For \$1 Per Week

By O. D. HALL

A FARM home butane gas system, installed almost eight years ago in the home of Paul Cooken, who resides six and one-half miles southwest of Kingfisher, Okla., is still giving trouble-free service, according to its owner. The 210-gallon tank was placed in the ground by Ed Hockaday & Co., hardware firm of Kingfisher, which claims that it was the first butane installation made in Kingfisher county.

Tank Buried Eight Years

The tank, buried about 20 feet from the Cooken home, has never been removed and there has never been any indication that it was not functioning perfectly, Mr. Cooken asserts. It supplies fuel for a six-room farm house equipped with a floor furnace of 55,000 B.t.u.'s capacity, a space heater which utilizes 20,000 B.t.u.'s at capacity, a bath-

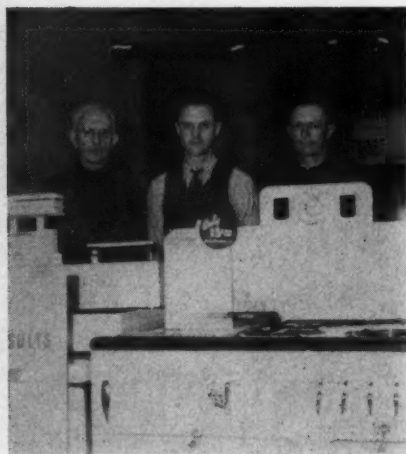
room heater, a kitchen range, automatic water heater and a gas refrigerator.

"Even during January of last year, the coldest month in many years, with all appliances going full blast much of the time, we never experienced a single moment of low gas," said Mr. Cooken proudly. "We get all this service, equivalent to the best in the cities, for less than one dollar per week, on the average. Before we installed butane we burned coal and wood and each winter laid in eight tons of coal at an average of \$8 per ton. This does not count the value of the wood we burned in the summer months. Even in the winter 185 gallons of butane will keep us supplied for about three months."

The fuel now costs Mr. Cooken

five cents per gallon so that the cost advantage is all on the side of butane, when compared with his former fuel bills.

E. T. Lucas, salesman and installer for the Hockaday firm, who installed the Cooken system, said



Left to right: E. T. Lucas, salesman and installer, J. Calhoun, salesman, both with Ed Hockaday and Co., Kingfisher, Okla., and Paul Cooken, farmer, reportedly owner of the first butane system installed in Kingfisher County.

that the tank was among the early types upon which the head, fittings and regulator equipment had to be assembled by the installer. Condensers were already built in the tank. It has three outlets, one for the regulator, one for the gage and one for filling.

C. L. Cross, manager for Ed Hockaday and Co., says that his firm was the first hardware store opened in Kingfisher at the establishment of the town in 1889. It

also pioneered in the LP-Gas business in Kingfisher county. The firm is now being operated as an estate. The company handles LP-Gas systems and appliances in connection with its hardware business. Its average farm installations are 215- to 220-gallon capacity butane tanks. The Borelli Hardware Co., of Okarche, Okla., supplies the Hockaday customers with butane and propane.

Where it is impossible to sell a LP-Gas system immediately the Hockaday company installs cylinders or small bottles for demonstration purposes on a rental basis. In the summer the gas usually is supplied in a mixture of 90% butane to 10% propane. A 70-30% mixture is used in the winter time.

During the 1940 Christmas season the Hockaday firm made a special effort to sell LP-Gas systems for Christmas presents and several were disposed of on that basis.



Employer May Assist Draftee In Securing Deferment

According to a recent communication from National Headquarters, Selective Service System, an employer may assist an employee in being deferred by appending an affidavit to his questionnaire giving full information as to that employee's position with his company, his value to it, and the relative shortage of other persons capable of filling the employee's place.

The employer should also state any facts which support the claim that the removal of the employee, without immediate replacement, would cause a material and substantial loss of effectiveness or productivity in the employer's enterprise.

Save Time---Be Accurate In Your Truck Deliveries

By CHARLES M. CORKEN

Corken Pump & Machinery Company, Oklahoma City, Okla.

TWO questions most frequently put to me by LP-Gas dealers are: "How can the time required for unloading be shortened?" and,



CHARLES M. CORKEN

"How can the service life of these truck pumps be lengthened?" The answer to both of these questions is found in the little space starting with the excess flow valve

in the tank outlet and ending at the suction inlet of the pump.

We were examining a truck owned by a west Texas dealer, which was equipped with a 90 g.p.m. pump. This pump could not possibly handle its full rated capacity because there was a $\frac{3}{4}$ -in. excess flow valve in the tank outlet. The suction piping was only $1\frac{1}{4}$ -in., with eight elbows, and the pump was mounted on a plate across the top of the frame, putting the inlet 12 inches above the tank outlet. The dealer told me that he had just heard that it was possible to get a truck pump with 120 g.p.m. rating and that he intended to order one to replace the 90 g.p.m. pump. He

seemed to be unaware of the fact that the difficulty was not in the size of his pump but in the improper assembly of the suction piping.

You buy a liquid, meter a liquid and your pumping equipment is designed primarily to handle a liquid. But you are handling a volatile liquid, ready to become a vapor at the "drop of an atmosphere". You can't pull LP-Gas to the suction of a pump as a liquid. It must flow there by virtue of weight or, in the case of underground storage, by differential pressure.

Your pump has to displace only .13368 cu. ft., for each gallon as a liquid, but when the liquid vaporizes the pump must displace 300 times that amount to move a gallon of gas.

You can get away from a gas separating installation at very little more cost than would be required for the cheapest installation and it will be the most profitable investment you can make, as it means faster transfer time and much longer pump life.

First, select your pump size to balance with the capacity rating of your excess flow valve. Arrange to mount the pump so that the suction line can be as short and straight as possible and so it will

follow a downward direction.

Use piping as large as the inlet of the pump. There are exceptions to this. Some 2-in. pumps have capacities above 35 g.p.m. For these 2½-in. line should be used. For 50 to 75 g.p.m. use 3-in. suction. There should be no high spots in the suction line and not more than two elbows. It often is possible to use 45° ells instead of 90°.

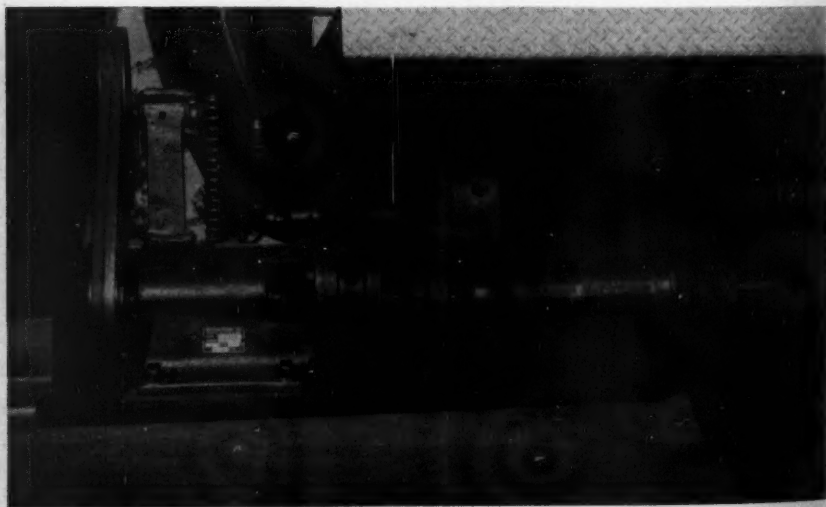
Pumps cannot be built to withstand twisting strains. Therefore, the suction line should contain an approved flexible metal hose and, if the discharge line is tied to the truck frame, such a hose can be used to advantage.

An accurate pressure gage showing the discharge pressure of the pump will help the operator to unload in record time. He can keep

one eye on the gage needle and one hand on the throttle. At the same time he can keep the pump turning at a speed which will enable it to handle all liquid at its maximum capacity. If he follows this course the operator will learn, while handling one load, the meaning of the different actions of the gage needle, since it shows whether all liquid, liquid and gas, or all gas, are going through the pump.

Even on your present pump installation the use of a pressure gage will prove to be an excellent investment, as it will save much unnecessary high speed operation of the truck engine and consequent useless revolutions of the pump. This will accomplish a four-way saving—time, truck engine wear, pump wear, and fuel.

On this installation notice the flexible suction and discharge connections, suction line full-sized pump inlet, center-line of pump below bottom of tank. The excess flow valve in this truck is rated at 60 g.p.m.



Gas Fuels and Refrigerates

Bahama Fishing Boat

ONE of the unique installations made by Sun Gas Co., Miami, Fla., is one in a 48-ft. fishing boat, running from Miami to the Bahamas, and picking up crawfish and lobster. It is named the "Langosta," and is a converted coast guard cutter.

The company equipped it for both refrigeration and power by using the same gas, running the gas liquid out of the cylinder through a liquid head pressure regulator into the fish storage compartments through an evaporation coil and then into a low pressure regulator into the twin motors of the boat, thereby using the same gas for fuel at a saving of about 1500 pounds of ice and a 30% reduction in fuel costs over gasoline. It also saves over ice 10% to 12% loss of fish daily, as lobsters have to be kept alive.

Propane Performs Two Operations

The gas was brought into the forward and rear compartments with separate lines, each separate refrigerator coil unit, whipping the two together and then into low pressure regulator and then was sent into the carburetors as dry gas, using propane, and so that as the motors were running it would pull the gas through the evaporation coils and refrigerator. This

FRED E. KUNKEL

method kept these refrigerating compartments down to about 54°. They put a battery of 12 cylinders aboard, six for use, with another battery of six in reserve.

In selling products to the consumer, the Sun Gas Co. uses customers for live leads and many sales are made direct through these customers, who are given a gas credit. By giving them service and explaining the selling plan, these customers send in enough business to keep the salesmen busy. More than 3500 customers have been sold in seven years of operation.

Employees Handle Service

The company does no advertising, gives free service to any of their customers, and trains all employees to handle gas service, including delivery and installation departments. The drivers and installers are all service men and can handle anything upon their regular calls.

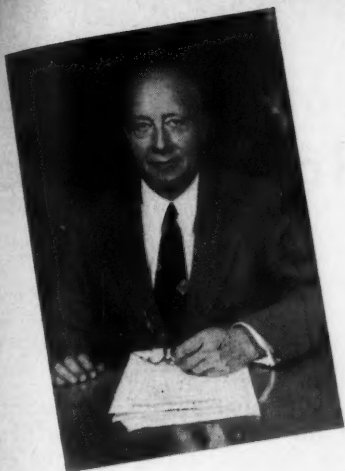
The company has recently built a new plant, mostly for warehousing, which holds about 3500 cylinders. The building is of poured concrete, with 15,000 gallon storage, and is purely a filling plant, warehouse, and cylinder storage.



Conventionites—



EASTERN MEETING: (Top, left to right) Plumer E. Pope, Fuelite Natural Gas Corp., Lexington, Mass., and Peter A. Anderson, Utilities Distributors, Inc., Portland, Me., the new Chairman and Vice Chairman of the Eastern Section, respectively. Attending the convention were (reading clockwise), at left, Charles Randall, Lester Sherman, and Harry H. Dauphinee, all of Suburban Gas Co., Providence, R.I.; R. H. Engstrom, Bastian-Blessing Co., Chicago, Ill. (rear). Left center are James V. Loughlin, New York, and William Hauck, Scaife Co. The center picture shows Adam Johnstone, Bastian-Blessing Co.; Theodore Johnstone, Sloane & Zook; Elsworth Mills, Bastian-Blessing. At right are Mark Anton and A. B. Ritzenthaler.



- Coast To Coast!



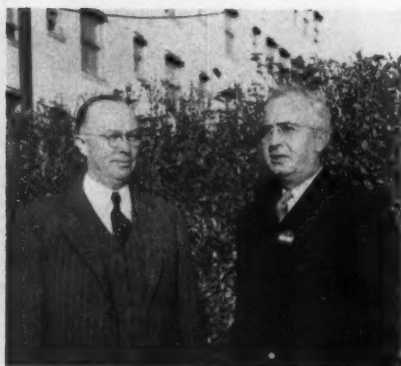
NATIONAL MEETING: (Top, left to right) E. L. Mills and B. D. Geroy, two members of the program committee.



PACIFIC COAST MEETING: (Center, left to right) L. O. McClure, representative for Ensign Carburetors, of Bakersfield, Calif., and M. F. Selwyn, Selwyn, Inc., Lynwood, Calif. C. M. Ambrose, Liquefied Gas Corp., Seattle, Wash., is in the middle picture, and to his right stand Howard J. Ferris and Thomas H. Preston, both with Day and Night Manufacturing Co., San Francisco. In the lower right hand corner are S. M. Robertson, Fabrifform Steel Products Co., Bell, Calif., and J. S. Fagan, of Mutual Liquid Gas Corp., Inglewood, Calif.

Pacific Coast Section Plans Divisional Group Meetings

By PAUL LADY



R. A. Hansen, Livermore, Calif., and Charles E. McCartney, Long Beach, Calif., newly elected Vice Chairman and Chairman, respectively, of the Pacific Coast Section, L.P.G.A.

MEETING in Stockton, Calif., Jan. 30, the Pacific Coast Section of the Liquefied Petroleum Gas Association elected Charles E. McCartney, Chairman and R. A. Hansen, Vice-Chairman for the coming year.

Mr. McCartney, general manager of Petrolane Co., Long Beach, replaces C. L. Parkhill, of Los Angeles. Mr. Hansen of Livermore, Calif., takes the place of Tallent Ransome, of Emeryville, Calif.

LP-Gas men throughout California, as well as representatives from other L.P.G.A. Sections gathered for the one-day meeting to discuss the progress made by the Association and to lay plans for

even greater activity during the coming year.

In a summary of the activities of the past year, outgoing Chairman Parkhill stated that the work of the Association through the co-operation of members has helped the industry in the West tremendously. He said that because of the work along the lines of safety education, regulation and elimination of fire hazards performed by this group, firemen throughout the west are now sold on the idea that the product can be safely handled and are interested in co-operating with LP-Gas dealers.

The appreciation of the group for the outstanding work done by Mr. Parkhill as Chairman of the Pacific Coast Section was expressed by a unanimous vote of thanks.

Representing the Pacific Northwest, C. M. Ambrose, Liquid Gas Corp., Seattle, Wash., addressed the group. He remarked on the rapidly growing interest in LP-Gas in the Northwest where many new dealers are to be found and the use of butane and propane for every need is expected to grow rapidly in the future.

R. E. Poethig, The Bastian-Blessing Co., Chicago, spoke on the growth of LP-Gas in the East.

He extended an invitation to the annual L.P.G.A. convention in Chicago, Feb. 24-25, stating that plans indicate the meeting will be highly instructive.

Accepting the gavel as Chairman, Mr. McCartney spoke on the importance of the Association to the industry from a social as well as a business standpoint. By mixing with other men in the industry, members will have a better conception of existing problems and will be able to handle them properly. "We must not have selfish motives if we are to succeed," Mr. McCartney believes.

Convention in June

In the afternoon business session, plans for the coming year were presented to the group. Foremost among these is the annual June Convention to be held concurrently with the Second Annual Pacific Coast L.P.G.A. Exposition. The date and arrangements for this meeting will be announced later by John H. Kunkel, secretary.

Outstanding in the program for 1941 is the plan for divisional group meetings. Presented to the organization by Chairman McCartney, the idea quickly caught on and was enthusiastically discussed. The idea behind such a plan is to bring more L.P.G.A. members together more often in the various sections of the Pacific Coast. This is in view of the fact that the Pacific Coast Section extends from Canada to Mexico.

Meetings are to be held at regular intervals and, according to present plans, the section will be divided into four districts compris-

ing Southern California-Arizona, San Joaquin Valley, Northern California and Bay District, and the Pacific Northwest. The meetings will be held in various cities throughout the districts.

According to present plans a bulletin will be prepared for distribution at each meeting. It will present questions and answers to problems current in the industry and will assist in coordinating the activities of the groups. A vice-chairman will be selected for each group.

Also a part of the program for 1941-42 will be the formation of a speakers' bureau. A standard paper, completely surveying the applications and utilization of LP-Gas will be prepared for presentation before other associations and groups interested.

Farm Survey Favors LP-Gas

Preceding the close of the meeting was a talk by Milton Burnham, of the *Pacific Rural Press*, on a survey made by that publication recently. He brought out the fact that 66% of the farmers contacted used LP-Gas for some purpose. Mr. Burnham said a cross section of 4000 rural residents given questionnaires showed that they used butane or propane in the following ways: cooking ranges, 65%; water heaters, 39%; refrigerators, 11%. The farmers were also asked what type or fuel or power they used for their water heaters, and it was found that 33% of the farms having water heaters were using butane or bottle gas for fuel. Electricity was second with 27%, and wood was third with 23%.

SELLING

Don't Argue

One of the first things a salesman needs to learn, said a gas appliance salesman of our acquaintance, is to avoid argument. Sometimes it is among the last things a salesman learns and sometimes he never learns it.

The funny thing is that most salesmen will shame you for being so elementary as to insist that "to win an argument is to lose a sale."

"Of course I know enough about selling to know that," he will say, but in spite of a confessed knowledge, I've seen 'em tumble into that very pitfall time after time.

Why? It seems to be human nature for a man to rise up in defense of his words whenever the slightest question is raised which tends to refute them. And he will often do this without hesitating a moment to consider the consequences. This seems particularly true when a man is telling about something which he knows from A to Z and which he believes with a full measure of enthusiasm will do just what he says it will do.

It is a fault a salesman can slip into so easily that he is not always conscious that he has become argumentative.

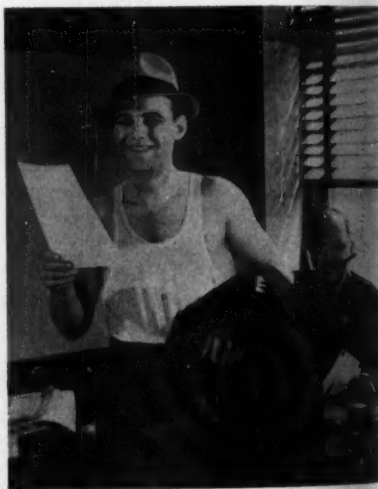
And the moral is not so much a matter of knowing its danger, but of being constantly and everlastingly on guard to avoid it.

Prospect Hunting

Of all the methods of prospect hunting I have witnessed, none has ever been a bad one. By that I mean, any method that is a method, has a purpose and is followed up, is a good one, I think.

But before prospect hunting can begin there must be found prospect hunters, who I am going to call the Birddogs of the Industry. These men are the backbone of our business, and if the manufacturers and the distributors will train and cooperate with these men we will build our business on a sound foundation.

The Birddogs of our Industry and



"GET-THE-ORDER" JOE . . . got the order but lost his shirt! Is always so anxious to get the business that he usually gets it on some basis that involves extra expense either to himself or his company. Wonders why no one gets excited about his business.

DOTTED LINE ROSCOE ... by Bob Crosby



"Mr. Roscoe's right, Pop, the light really does go out!"

the bird dogs of the game hunter seem to have the same faults, as well as good points. I was talking with a friend of mine the other day, who is a great bird hunter and dog raiser. I asked him to show me the difference between a good dog and a not-so-good dog. He showed me one dog which he said was about a \$50 dog. This dog kept his head and tail down, and although he might run up on a few singles, he would probably scare several coveys.

The one, which my friend called a \$300 dog, will go out into the field with his head and tail up, and may miss a single but never a covey.

So, it just brought this thought to my mind: If we go out with head and tail up, in our language we'll bring home the bacon; and, in the language of the dog, we'll bring home the bird!—*W. G. Petty, Jr., Memphis, Tenn.*

Rewinding Salesmen

A clock runs because it is wound up. It is manually inspired, so to speak. It runs down because new life is not injected into it in the manner understood by all.

There is a close parallel between clocks and salesmen. Humans run down. As they get nearer to the point of complete mental or physical fatigue they strike less effectively.

When this happens they need "re-winding" to renew their driving power.

Mental stimulation may come from good examples set by others; from constructive self-analysis; from cultivated ambition; from urgent need; from pride, from desire to excel. Physical renewal may be

had in cold baths, more sleep, less drink, recreation, normal living.

Each individual nature requires a particular character or quality of inspiration when depression comes. To those given to self-analysis it is an ever interesting experience to search for causes and effects within themselves. To extroverts, who never look in a glass except to comb their hair or arrange their ties, development and improvement most readily come from competition, or observation, or imitation, or suggestions.

The thing to do is to find out what kind of a stimulant, or uplift, you need. Apply it, and go back to work!



"BIG-MOUTH" LOUIE . . . talks himself into a sale and out of it all in the same breath. Forgets that salesmen have to be good listeners as well as talkers. Never learned that the prospect appreciates a chance to tell his side of the story.



Anaconda Copper Tubes

make for quick, workmanlike installation

Annealed by a closely controlled process, Anaconda Tubes are uniformly soft; they can be cut, reamed or bent by any of the usual methods, and flared without cracking.

Clean, smooth, inside surfaces, accuracy in size and shape, and freedom from defects are features you can be sure of in Anaconda Tubes. Complete freedom from rust provides true economy, re-

duces servicing and promotes good will.

So remember, make it Anaconda for efficient, durable bottled gas services. 20 foot straight lengths and a wide variety of coiled lengths are available through distributors everywhere.

Anaconda Flared Tube Fittings are made of cast bronze, in sizes from 1/8" to 2" inclusive. Cast bronze and wrought copper solder type fittings from 1/4" to 4" inclusive are also available.

4121

THE AMERICAN BRASS COMPANY, General Offices: Waterbury, Connecticut
in Canada: Anaconda American Brass Ltd., New Toronto, Ont. • Subsidiary of Anaconda Copper Mining Co.



MARCH 1941

Gas Range Merchandising

LARGE and small dealers the country over have contributed their share respectively to the many romances of merchandising successes that have created giant industries, which in turn have built and sustained our national prosperity.

Within the experiences of all of us, we have seen the growth of the automobile, radio, and refrigerator industries—to mention some with which we are most familiar.

National advertising and merchandising promoting personal cleanliness, better health, attractive appearance and more enjoyment have been a most significant influence in our democratic setup.

How about gas range merchandising?

Naturally, there must be a market, or a potential market, for any product before it can be merchandised and sold. Let's see what that market is! Range manufacturers in analyzing their markets divide them into two distinct fields:

- (1) City gas ranges.
- (2) Liquefied petroleum gas ranges.

It is the so-called "bottled gas" market, however, in which we are most concerned, together with the merchandising of ranges for this service. Of the 30,000,000 homes in the United States, 16,500,000 use natural or manufactured gas for domestic purposes, 2,500,000 use electric ranges for cooking,

- C. V. McConnell, general sales manager of the Tappan Stove Co., Mansfield, Ohio, presented a paper entitled, "Gas Range Merchandising," before the Fall dealer convention of Green's Fuel, Inc., Sarasota, Fla. The first part, devoted to the factors which influence successful bottled gas appliance merchandising, is published this month. The second part of the paper, giving a comparison between gas and electric cooking, will appear next month.—Editor.

and 800,000 use liquefied petroleum gas, leaving a potential national market of 10,200,000 for liquefied petroleum gas. It is interesting to learn that while electric ranges have increased three times in volume since 1928, bottled gas ranges have increased 34 times.

The factors for successful bottled gas appliance merchandising are:

The convenience and economy of the appliances are important for the best job of merchandising.

Is not the prospect's or existing customer's conception of the service entirely measured by the degree of satisfaction enjoyed from the appliances that utilize the fuel?

Can she prepare better meals with less effort?

Will she enjoy greater comfort?

Will she have more time to devote to other interests?

Will her cooking costs be economical and within the claims



THE RIGHT RANGE

MOORE'S

A HIT EVERY TIME



MOORE'S..the Right RANGE

...for PERFECT PERFORMANCE



MOORE'S "MILADY" GAS RANGE

MOORE'S—the complete bottled gas line . . . Gas—Combination—Bungalow Ranges. Your customers' stove requirements can be entirely satisfied with a Moore's. New features offer more convenience . . . greater economy . . . better performance.

See Moore's complete line on display in space 45 at L.P.G.A. Convention,
Palmer House, Chicago, February 24 - 25.

THE MOORE CORPORATION

Quality Since 1857

JOLIET, ILLINOIS

made for them because of special engineering?

Will her kitchen be cleaner and easier to care for?

Will her range be smartly designed, and does it compare favorably with other appliances using other fuels?

These and other questions are uppermost in your customer's mind when you approach her regarding this new service.

Cheap appliances will not stimulate her pride of possession. They mean increased servicing; increased fuel consumption and higher cooking costs; more chances of repossession—in short, less satisfaction. They are not profitable to dealer or salesman. A good range commands a decent price and, in turn, better profit. Cheap ranges are not profitable.

Observe, if you please, the high type of domestic appliances offered on the sales floors of gas utilities. They have learned by their long (and sometimes costly) experience, it is wise to feature only well engineered ranges, water heaters and refrigerators.

Salesmen

The retail salesman is the neck of the bottle in sales accomplishment. Your business grows or fails according to his qualifications, his training and his industry.

No matter how much advertising is done to pave the way, it still is the salesman's job to locate prospects and consummate the deal.

Proper and adequate compensation is essential to attract and obtain alert, industrious service. A liberal commission with an addi-

tional incentive for certain volumes monthly in a general way seems to represent the most productive set-up.

Needless to say, the salesman must know the selling and working advantages of the range he is trying to sell. Too many salesmen are possessed with the idea of selling equipment rather than selling gas service.

Surely he is a better salesman if he sells comfort, convenience, ease, more free time, cleanliness, quality—the things a modern range will bring about—rather than confuse her with B.t.u.'s and other uninteresting technicalities.

Cooking Knowledge Helps

Essential to his best success is a knowledge of cooking. He should be able to mix and bake a pan of biscuits. He should know from experience the advantage of low temperature roasting. He should be able to demonstrate simmer cooking and broiling.

In a general way, there is no substitute for work, and time is one of the salesman's most valuable possessions. It must be remembered that only the "average" salesman works part time. He heeds, therefore, careful checking, for it is a common fault that he works all over the map in unsystematic manner, with loss of time and added expense.

Give me the salesman who is genuinely interested in making money for himself (and I do not mean one who would merely like to make money) and I will have a good salesman.

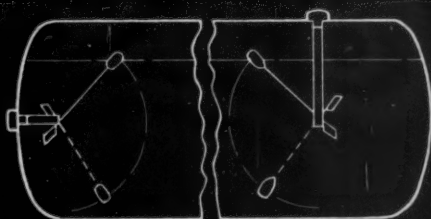
GOING TO THE L.P.G.A. MEETING IN CHICAGO?

... Then be sure to visit BOOTH NO. 46
and look at the complete line of

ROCHESTER *Criterion* GAUGES

P.S. If you're not attending then write direct for complete information

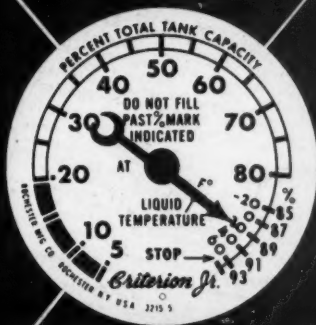
ROCHESTER MANUFACTURING CO. INC., 17 ROCKWOOD ST., ROCHESTER, N. Y.



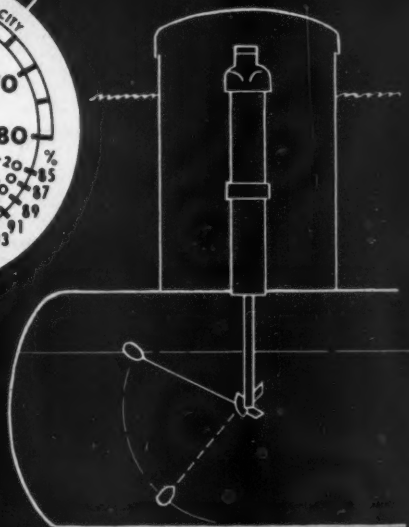
End or Top Mounting—
Above Ground System



Top Mounting—
C.C. or A. S. M. E.



Top Mounting—
Below Ground System



ROCHESTER *Individually Calibrated* **INSTRUMENTS**
GUARANTEED ACCURATE

ACCURATE LIQUID-LEVEL, PRESSURE and TEMPERATURE INDICATION

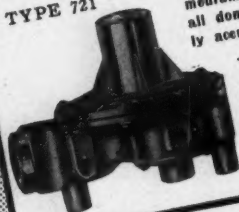
FISHER

**Offers a Complete Line
of Liquid Petroleum
Gas Control Equipment!**

Fisher equipment is proved by tens of thousands of installations. It completely meets your needs and assures your customers best satisfaction. Fisher Bulletin 42D gives full information and prices.

SINGLE DRUM REGULATORS!

TYPE 721



TYPE 721! Features the largest capacity of any medium size regulator on the market. Designed for all domestic and normal commercial loads. Extremely accurate pressure regulation.

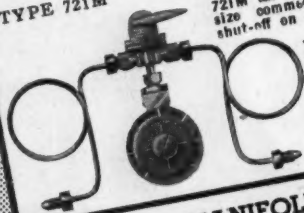
TYPE 722! Extra large capacity—up to 300 cu. ft. per hr., even though tank pressure is only 5 lbs. Especially designed for large demand loads. Incorporates integral relief valve, factory set and sealed. Die cast body.

TYPE 722



TWO DRUM ASSEMBLIES!

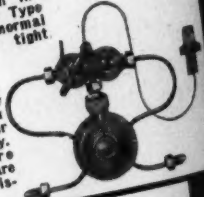
TYPE 721M



TYPE 721M! Convenient manual change-over mechanism together with accurate regulation incorporated in the 721 regulator makes the Type 721M an ideal assembly for domestic and normal size commercial installations. Maintains tight shut-off on reserve tank.

TYPE 721T! Designed to operate multiple drum assemblies with full automatic change-over without attention from customer or interruption in gas supply. Particularly adapted where automatic gas appliances are used. Complete customer satisfaction is guaranteed.

TYPE 721T



PIGTAILS, MANIFOLDS, ACCESSORIES!



Fisher Pigtail Connections are available in a full range of shapes. Also other accessories required by the industry.

TYPE 752! Manual Throw-Over Manifold—maintains tight shut-off on reserve cylinder. Can be added to most Fisher regulator installations.



TYPE 752

FISHER GOVERNOR CO.

O. M. GALIHER
950 McCarten Hwy.
Newark, N. J.

COMPLETE
WAREHOUSE STOCKS
FOR QUICK DELIVERY

922 FISHER BUILDING
MARSHALLTOWN, IOWA

GEO. R. FRIEDRICH
2334 E. 8th Street
Los Angeles, Calif.

Customer satisfaction represents one of the most potent influences for increased sales. Can you imagine the difference in the attitude of the woman receiving her new gas service if the heat control does not function as compared with the pleasure of having a prize winning cake or pie on her first attempt at baking?

Can we blame her for feeling perhaps she had not made a good choice if doors or drawers or certain parts need some adjustment for best operation and appearance?

What Service Man Should Do

It should be the service man's job to instruct her as to proper use of simmers, proper lighting of oven, use of heat control, and proper care of the range.

The service man should instruct her on the proper baking pans to use and where to place them. Many a woman has condemned the range because she used a black pan with high edges and obtained biscuits badly burned on the bottom.

Isn't it true that the woman who is receiving a lot of pleasure and satisfaction from her range is more susceptible to considering hot water service and refrigeration?

Most important of all, however, is safety. Many an installation is made at the day's end or under some other hurried condition that tends to bring neglect. Accidents are mighty costly to business, and proper, safe installation is just as much a part of the general merchandising of your service as anything else.

A display of at least three ranges for the small dealer and six ranges

for the larger dealer is the very minimum that should be maintained at all times, to give the prospect some choice of models and prices. True, a very appreciable percentage of ranges can be sold without recourse to inspection on the sales floor, but for best and most effective merchandising a certain choice and selection should be provided.

Very important is the matter of having a connected range to provide live and actual demonstration of the speed and cleanliness of its flame, its quick heating oven, its comfort by reason of its insulation, and other factors.

It's the difference between taking a ride in that prospective new car to know its power, its ease of handling and comfort, and merely looking at it. And how about a water heater and refrigerator similarly connected and on display to show you have a complete service and a going business?

Demonstrations

The actual demonstration of the range in cooking, baking and broiling constitutes one of the most effective forms of promoting sales.

On the sales floor where there is a connected range and where definite appointments have been made with prospects, it is a very simple matter to have biscuits prepared ready for baking. There is a very convincing value in merely lighting the oven, setting the oven heat control and placing the biscuits inside with finished results in 12 to 14 minutes without further attention. It does not require any particular qualifications for

the salesman to make this demonstration.

Where a regularly trained home service operator is not available, there is in almost any community a woman with sufficient time and native talent to carry on sufficient demonstration work to prove the practicability and performance of the range. Fairs, church activities and groups, members of community or county extension organizations, 4-H clubs, all offer opportunities for demonstration work.

Setting up a "user's day" for recent purchasers and to which prospects are also invited affords an opportunity well worth the time, trouble and small expense.

Perhaps you are familiar with the use of demonstration trailers as employed by the Philgas Division of the Phillips Petroleum Co. in which the demonstrating equipment is installed and operated by its own men. The purpose is (1) to sell new dealers and (2) as a retail sales medium. In retail selling, the trailers are used primarily for so-called "closing" calls by appointment or for a definite plan of organized calls. These trailers afford special interest when parked at public gatherings, at beaches, lake properties, etc. Experience has been that for cold canvassing, the trailer involves more time than is practical, but for effecting a decision by prospects it has proven to be quite helpful.

Advertising

Advertising involves choosing a medium that fits the community. Where the newspaper is available

and has the proper coverage, linking the service with a nationally advertised appliance adds materially to the acceptance of your service.

An increasing number of dealers use direct mail, not so much to pull customers as a pre-approach to the salesman's call.

In this day of amateur photography, a large board on the sales floor containing photographs of users' homes with their names and addresses constitutes a very impressive exhibit of local acceptance. Likewise, a folio with such photos for the use of the retail salesman in connection with his outside calls serves a like purpose.

What are the two things uppermost in the minds of your prospects? We dare say cost of purchase and cost of service. Certainly an exhibit of customers' bills, giving names, addresses, number in family and period of use, would make a valuable and convincing exhibit as to costs.

Using the User

Under the subject of "Using the User" we come to one of the most productive methods of obtaining sales, i.e., through leads furnished by present owners. It is an old and proven plan. It merely consists of awards to users for the names of prospects sold within a given time, say 30 or 60 days, as agreed upon by the dealer. The awards usually consist of merchandise, (griddle, coffee maker, whistling teakettle) or credits for the purchase of fuel. We have found a very attractive cook book as interesting for this purpose.

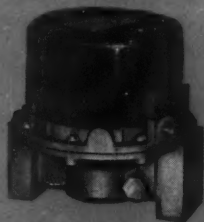
Especially Designed for



by

MINNEAPOLIS HONEYWELL

THESE M-H Gas Valves are available for L.P.G. in all sizes and types. They are equipped (optionally) with manual reset which permits manual opening of the valve during absence of current supply. Types V148 and V448 diaphragm gas valves as well as the V16 have (optionally) the manual reset feature plus automatic recycling. Magnetic valves, however, are non-recycling and must be manually reset on resumption of current. M-H Gas Valves have a pressure rating of eight ounces per square inch and are leak-proof. You will find it easier to sell your equipment when you say, "We use Minneapolis-Honeywell controls exclusively." Minneapolis-Honeywell Regulator Company, 2776 Fourth Ave. S., Minneapolis, Minnesota . . . Canadian Plant: Toronto, Ontario. European Plant: London, England. Company owned branches in 49 other cities.

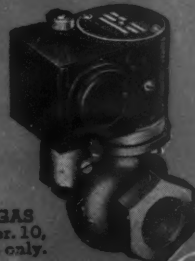


V148 DIAPHRAGM GAS VALVE for L.P.G., series 10 and series 40, available in $\frac{3}{4}$ ", 1", and $1\frac{1}{4}$ " sizes.

V835 MAGNETIC SOLENOID GAS VALVE for L.P.G., available in $\frac{1}{8}$ ", $\frac{1}{4}$ ", and $\frac{3}{4}$ " sizes.



V84 SOLENOID GAS VALVE for L.P.G., available in 1" and $1\frac{1}{4}$ " sizes.



V16 MAGNETIC GAS VALVE for L.P.G., ser. 10, available in $\frac{1}{4}$ " size only.

Play Safe! USE

MINNEAPOLIS-HONEYWELL

GAS CONTROL Systems

We recently talked with a successful dealer who had made something over 400 installations in three years. He stated the use of this plan had been very instrumental in building his business to the point now that he has so many customers cooperating, fully 25% of his sales were to prospects supplied in this manner by his users.

With definite prospects to follow up, there is less cold canvass work, less waste of time and lower cost of sales for the salesman.

Must Remind Prospects Often

Like every other sales plan, it requires proper follow-through. The mere mailing out of the offer to owners does not accomplish the trick. They must be reminded frequently.

Occasionally there are opportu-

nities for school installations. The manufacturer is usually willing to extend a special discount to help qualify for this business, and correspondingly the dealer should make a special effort to gain such installations. Can you imagine the effect of young girls telling their mothers of the ease, cleanliness and speed of cooking with the marvelous bottled gas?

City Gas Companies

We recommend where city gas utilities are established in various towns, the bottled gas dealer have occasional contact with them. There are marginal residents to whom it is not economical to extend the city gas mains, and in most cases such utilities are agreeable to supplying the names of prospects, providing, of course, the utility is not a combination company.



A portion of the showroom for LP-Gas appliances in the new offices of Green's Fuel, Inc., at Sarasota, Fla.

★

*Your Biggest year-'round Load
Builder is **WATER HEATING**
Your easiest way to get it is
with **HOTSTREAM**
Water Heaters*



• Without a Hotstream Automatic Water Heater, your customers are deprived of the greatest convenience of Gas in the home. You are deprived of the biggest load builder.

No. 41 CATALOG Now Ready

Get acquainted with the new 1941 Hotstream line of heaters—specially designed and built for safe, efficient, economical operation with Liquefied Petroleum Gases. With the Hotstream line you can offer your customers anything from a small tank heater to a 75-gallon automatic . . . a heater for every requirement.

Write today for your free copy of the Hotstream Catalog No. 41—describing the science of water heating.



THE HOTSTREAM HEATER COMPANY
8007 GRAND AVENUE • CLEVELAND, OHIO

MARCH, 1941

Fire Fighters Show How It's Done

LIQUEFIED petroleum gas took the "spotlight for a day" when a division of the California State Department of Education held a three-day fire training school at Bakersfield, Calif., Jan. 29-31.

The school, held by the State's Bureau of Trade and Industrial Education for the Central California Rural Fire Association was attended by more than 100 men employed throughout Central California for fire protection and control work.

In charge of the program was David F. Glines, supervisor of fire training for the Bureau, who con-

sidered LP-Gas important enough to spend one whole day teaching the elementary facts of handling and using butane and propane gases. The course included transportation, storage, safety devices and measures used in fire control.

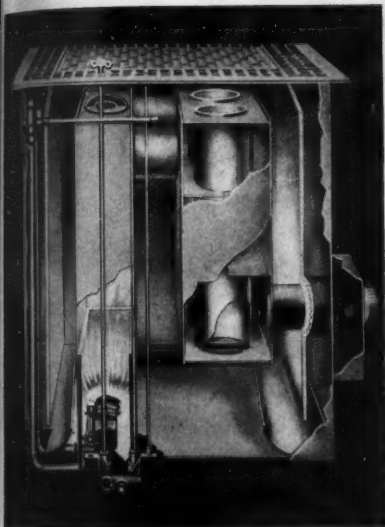
An important part of the course took place in the classroom where Max Anfenger and O. W. Johnson, both of the Standard Oil Co. of California, presented the elementary facts of LP-Gas to the fire chiefs and their assistants.

The second part of the training consisted of a demonstration and discussion on how to control and

Crew shown knocking butane gas fire down with fog nozzle from safe distance. Next step in extinguishing fire is the closing of valve on end of pipe by one member of the crew. This man always should be protected by spray until gas is completely shut off and fire extinguished.



See it in Chicago!



THE LPG FLOOR FURNACE WITH 100% SAFETY PILOT

All LPG WARDS are equipped with automatic 100% Safety Pilot. *Doubly-dependable*, it shuts off gas flow to both burner and pilot if flame is extinguished. *Not one bit of gas escapes!* Relights easily...with no more effort than ordinary pilot.

Ask or write for our latest catalog.

The LPG Association Convention is your opportunity to meet this fine floor furnace "in person" and to get firsthand information about this most practical means of building up your

SPACE HEATING PROFITS

A Ward Floor Furnace burning your gas brings the best of city home winter comfort to homes "beyond the gas mains." Guaranteed for ten years, it is backed by the reputation of an established, nationally-known manufacturer who has been building the finest of heating equipment since 1909.

FOR OLD OR NEW HOMES

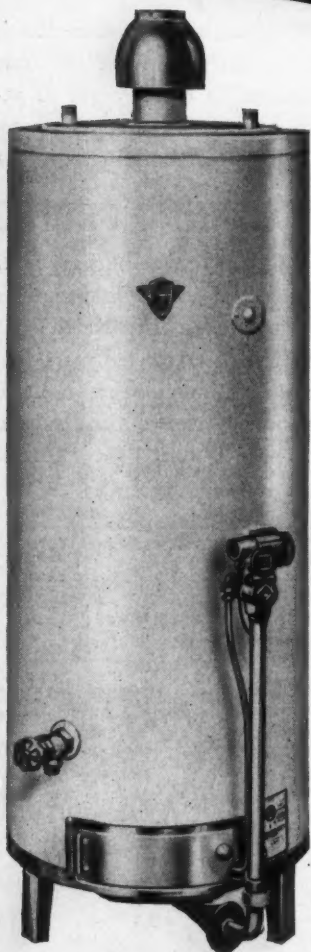
No basement necessary. Furnace hangs from joists beneath floor...is quickly attached to vent and gas line...ready to go to work in a few hours.



WARD HEATER CO. • LOS ANGELES, CALIF.

MARCH-1941

IT SELLS ITSELF!



The Budget Gas-Fired Storage Water Heater — made especially for bottled gas!

AMERICAN
HEATING EQUIPMENT
COSTS NO MORE THAN OTHERS

IT HAS BEAUTY, it has fifteen quality features—and it bears the famous, familiar name, American Radiator & Standard Sanitary Corporation. For these reasons alone customers are quickly convinced of the quality and dependability of the Budget GAS-FIRED Storage Water Heater!

In addition, it has been designed by experts expressly for economical, efficient and automatic operation with bottled gas. It is available in four sizes with tanks of 15, 20, 30 and 40 gallon capacity. And it is modest in cost!

Write to our Pittsburgh Office for full facts on the Budget GAS-FIRED Storage Water Heater and for the name of our nearest sales office.

**AMERICAN
RADIATOR & Standard
Sanitary**

New York CORPORATION *Pittsburgh*

Cast Iron & Steel Boilers & Furnaces • Radiators • Cast Iron Enameled & Vitreous China Plumbing Fixtures & Plumbers' Brass Goods • Winter Air Conditioning Units • Water Heaters • Heating Accessories
Copyright 1941, American Radiator & Standard Sanitary Corporation

★ DEFEND OUR COUNTRY. ENLIST NOW IN THE U. S. REGULAR ARMY ★

extinguish liquefied petroleum gas fires. Equipment of every type used in the control of LP-Gas fires was assembled in a large vacant area where various butane fires were allowed to burn.

Demonstration and discussion were under the supervision of Stanley Clithero, General Petroleum Corp., and Keith Lamont, Parkhill-Wade, Los Angeles, members of the Safety Committee, Pacific Coast Section, Liquefied Petroleum Gas Association.

Demonstrations included butane gas and liquid fires under various conditions. Stressing the point that is continually brought out by fire control experts, Mr. Clithero pointed out that LP-Gas fires should not, in the majority of cases, be extinguished, but the fire should be controlled until the gas or liquid could be shut off at its source. This is extremely important, he stated, for if the flame is put out and the butane or propane gas is allowed

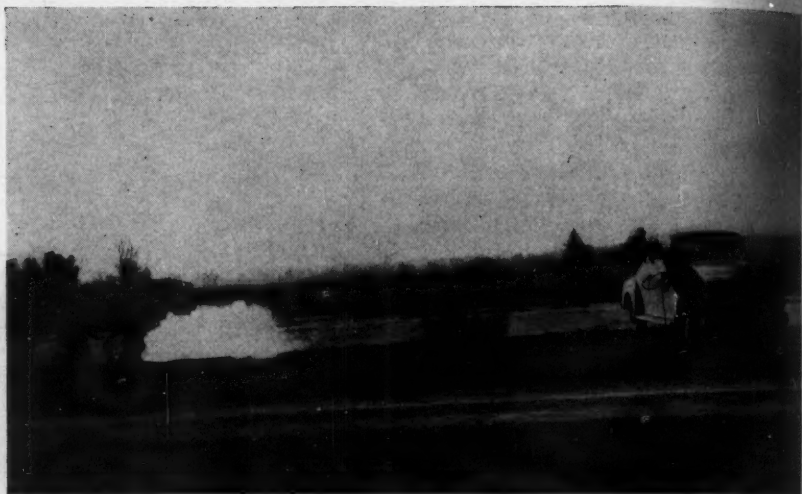
Controlling and extinguishing butane fire with two "Dugas" hand extinguishers from safe distance. Gas is first shut off at source.



David F. Glines, Supervisor of Fire Training, Bureau of Trade and Industrial Education, Calif. State Dept. of Education; C. L. Parkhill, Retiring Chairman Pacific Coast Section, L.P.G.A. Co-operating with Mr. Glines' Fire Training School, Mr. Parkhill brought members of L.P.G.A.'s Safety Committee on the Pacific Coast to the Bakersfield meeting.



to escape into the atmosphere it might again ignite, bringing damage and injury to property and persons in the area. It is better to let the fire burn, under control, until the liquid is gone from the tank, it is believed, providing the gas can not be shut off at the source.



Cloud of escaping butane undergoing test in attempt to determine explosive mix range. Man on right holds J-W flameable mixture indicator which showed that at 40 feet, under existing conditions, the gas mixture was less than half rich enough to burn. Here 2 to 3 gals. a minute were escaping, temperature was about 65 degrees and there was little wind. When there is proper ventilation vapors tend to rapidly dissipate.

Equipment used in the demonstration included fog nozzels of various sizes and kinds, CO₂ extinguishers of various makes and Dugas extinguishers of both hand and engine size. This equipment was furnished for the school by a number of leading fire extinguisher companies that manufacture extinguishers for LP-Gas fires.

The fact was shown by the numerous demonstrations that LP-Gas fires can be completely extinguished by straight stream and water spray or hand equipment, such as CO₂ and Dugas, if the operator cares to do so. Thus, if it seems advisable to extinguish the fire, it can be done. Equipment of this type should be available wherever LP-

Gas is used, always remembering, officials pointed out, that the escaping gas should be shut off at once.



Important Fractionation Paper Given at C.N.G.A. Meeting

At the February meeting of the California Natural Gasoline Association in Los Angeles an important paper was delivered on fractioning problems encountered in the natural gasoline industry.

It was prepared by F. D. Parker, process engineer of the Union Oil Co. of California and was entitled, "Multi-column Fractionation in the Natural Gasoline Industry." The paper was an analysis of methods and included comprehensive data and test results of the mechanical solutions of problems encountered.

A SCIENCE IN ITSELF

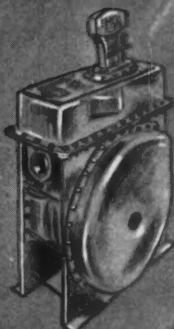
Designing and Building PRECISION Equipment for the
MEASUREMENT, REGULATION AND CONTROL
OF LIQUEFIED PETROLEUM GASES



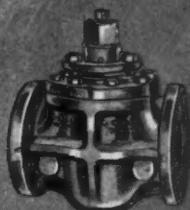
EMCO SPECIAL
BUTANE-PROPANE METER



PITTSBURGH MOTORCYCLE METER



EMCO LARGE CAPACITY
PRESSED STEEL METER



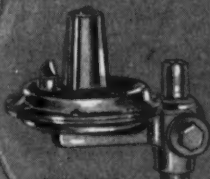
NORDSTROM STANDARD VALVE



EMCO APPEARANCE REGULATOR



EMCO LARGE CAPACITY
IRON METER



EMCO DIRECTOR
SERVICE REGULATOR

THE development of the LPG industry from its first simple beginnings to its present day place of importance is a tribute to the engineering ingenuity of all those who have fathered its progress.

From the first "bottled gas" installations to the complex yet efficient present day central plant systems for the distribution of LPG, the research and technical facilities of this organization have contributed a multitude of improvements and advances in measurement and control.

The many basic products pioneered in the past, the new products recently announced and those still on the drawing boards are indicative of the progressive spirit of this organization. They personify the results obtainable from a carefully planned, adequately staffed, long range program of research and development.

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MERCO NORDSTROM VALVE CO.**

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EMCO METERS AND REGULATORS • NORDSTROM LUBRICATED PLUG VALVES • PITTSBURGH LIQUID METERS

Modern Measuring Of A Modern Fuel

By A. G. WUERTZ

West Florida Gas Co., Tampa, Florida
Representatives of Ralph N. Brodie Co., Inc.

TO PREVENT the possibility of any misunderstanding in this discussion* of the subject of metering liquefied petroleum gases, it is to be noted that the statements which follow are to deal with the measurement of the gases in the liquid state exclusively. No attempt will be made to draw any comparisons between the two problems since each are distinctive and not analogous.



A. G. WUERTZ

Experience has taught that many liquefied gas dealers usually have three questions regarding the use of liquid meters for the measurement of these fuels. (1) Why meter petroleum gases? (2) How may liquefied petroleum gases be metered with dependence and accuracy? (3) What are the advantages of metering liquefied petroleum gases?

In an analysis of the first question, it is well to trace the various

developments and steps in the growth of the liquefied petroleum gas business which has brought it to the point where it is recognized as the fastest growing industry in the United States today. It is interesting to note that the remarkable growth of the industry has in many respects followed along comparable lines with the fuel oil industry. It has been subject to very similar conditions in its expansion and growth and has experienced about the same "growing pains." While it is true that a certain measure of competition exists between the two industries, yet a casual study of the growth of each offers food for study. Both the LP-Gas and domestic fuel oil industries have within the span of hardly 20 years attained proportions where they are a commanding factor in the country's general business and economic structure.

It is hardly disputable that the LP-Gas business is the younger of the two industries. The fuel oil business received its first great impetus about 20 years ago. The development of oil burners and the modernization of the old coal oil stove marked the start of an unusual increase in fuel oil consump-

* A paper delivered before the National Butane Gas Co. convention in Memphis, Tenn., Dec. 16.



"HEATWAVE"

A Complete Line for the

L.P.G. INDUSTRY

"Day & Night" brings to the L.P.G. Industry a complete line of Space and Water Heaters designed "from the ground up" to meet the specific requirements of Liquefied Petroleum Gases. Only in "Day & Night" can you get the famous "Heat Trap" and other exclusive features which assure economy, efficiency and long life features which make "Heatwave" the outstanding value among L.P.G. appliances.

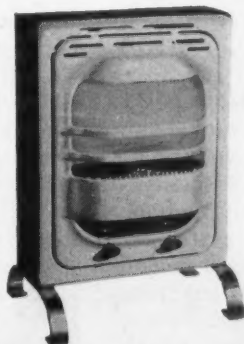
. and a line of WALL and PORTABLE HEATERS with the amazing LECTRO-GLO BURNER!



LECTRO-GLO Grid-and-Burner design is utterly different in appearance and performance. No fragile mantles or radiants to break or discolor. No open flame. The patented Nichrome steel grid gives double assurance of complete combustion. Thus, Lectro-Glo Heaters require no vent.

Available
in Single
and
Twin-Burner
Models.

LECTRO-GLO Heaters combine attractive appearance with maximum efficiency. Fronts are pressed steel, finished in porcelain enamel. Heat is radiated, reflected and circulated, warming the entire "living zone" uniformly. Made in two types: Lectro-Glo Wall Heaters for permanent installation; Lectro-Glo Portable Heaters in 2 styles (with legs, as shown on right, or console type).



STANDARD FINISHES:
Ivory, Walnut and White.
Special colors to order.

WRITE FOR SPECIFICATIONS AND PRICES

DAY & NIGHT Manufacturing CO.

MONROVIA, CALIFORNIA

Warehouse Stocks at Convenient Shipping Points



"Heatwave"
Water Heaters
3 Models



"Heatwave"
Floor Furnaces
4 Sizes



"Heatwave" Console
Heaters—3 Sizes
All with the Famous
"HEAT TRAP"

tion which has grown tremendously each year.

Statistics show that in 1922 the consumption of LP-Gas in the United States was about 220,000 gals. However, in the short period from 1932 to Jan. 1, 1940, the consumption of LP-Gas increased from 34,000,000 gals. to 227,000,000 gals. From this it may not be entirely unreasonable to consider the liquefied petroleum gas business of today as quite a husky youngster for seven years.

This tremendous increase in the annual consumption of liquefied petroleum gas appears to be attributable to the development of the so-called "plants" or "systems" above or below ground on, or adjacent to, the premises where the fuel is consumed. Householders in rural or urban sections and small towns where city gas service was not available were not able to enjoy the comfort, economy and convenience of their city cousins.

Not a Matter of Comparison

Previous to the introduction of these plants or systems, most liquefied petroleum gases were handled exclusively in small bottles or pressure vessels, as they were known. Of course, a large amount of this fuel is still marketed in this manner and there is no intent in this discussion to compare the advantages of this type of package service to that of the bulk delivery character which serves to supply the individual plants or systems.

The fuel oil and LP-Gas dealers of today have at least one common problem, that of handling a liquid fuel in bulk. True enough,

many dealers serve their respective trade with both bottled or package fuel as well as bulk deliveries. However, it appears that the metering or measuring of these bulk fuels is the problem of greatest importance.

Can Profit from Other's Experience

Doubtless the LP-Gas dealer can well afford to profit from the fuel oil dealer's experience, at least so far as determining the most advisable procedure for the handling and delivery of bulk fuels. The business of distributing fuel oil is just emerging from the swaddling bands of the 1920's in which it was born. Last year 55% of the fuel oil distributors loaded the tank trucks of their customers through meters. The remaining 45% still guess at daily and yearly sales volumes by totaling estimates made from reading notches on a stick.

Of course, the mechanics and facilities for the storage and distribution of liquefied petroleum gas are much more complex than those involved with burning oils. Nevertheless, the dealer's problem of properly accounting for bulk stocks, of providing delivery service that will strengthen his contact with his customers, and finally of establishing some accurate method of delivery, can be worked out along similar lines adopted by the modern and efficient fuel oil dealer.

Repeated inaccurate deliveries may also result in a sales loss and in the even greater loss of a valuable customer. Measurement devices such as slip tube and dip gauges, liquid level or percentage indicators, all serve their purpose

SINCLAIR

Liquefied Petroleum Gases

AVAILABLE

FOR WHOLESALE BUYERS ONLY

Produced by a company whose national reputation is an absolute guarantee of quality—

Manufactured by old experienced hands working with new modern equipment—

SINCLAIR Liquefied Petroleum Gases (butane-propane) are sold only to wholesale buyers.

A satisfactory record of fair treatment in the past is the best assurance of square dealing in the present. For a NON-COMPETITIVE, dependable supplier of butane-propane gases—

TRY SINCLAIR

SINCLAIR BUILDING,

TULSA, OKLA.

SINCLAIR PRAIRIE OIL COMPANY

MARCH-1941

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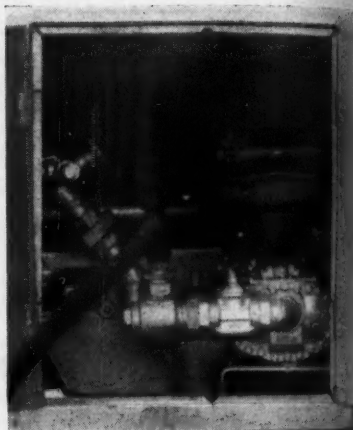
to a limited extent. However, they all have certain limitations and are all to a certain degree, dependent on the human equation.

A Higher Degree of Accuracy

Positive displacement fluid meters of the correct design, properly installed, will produce a much higher degree of accuracy, with greater convenience and dependency in the measurement of liquefied petroleum gas than any of the devices just enumerated. This statement can be substantiated by any dealer now so equipped.

The comparisons just made should serve, at least as general evidence, that there is very definitely sound and economic reasons why liquefied petroleum gases should be metered with positive displacement fluid meters.

With recognition of the necessity, the second question of how may these gases be metered with dependence and accuracy is most fitting. Before commenting on this subject, the following information is given with the hope that it will further serve to inspire the confidence of all dealers in this vital subject. On April 11th and 12th, last, in cooperation with the University of Oklahoma, at Norman, Okla., the Petroleum Division of the American Society of Mechanical Engineers held its second fluid meter symposium. This conference was confined exclusively to the study and analysis of results, methods, tests, and further recommendations as to the use of fluid meters for the measurement of all petroleum products, including engineers, executives and representa-



A Brodie meter on a Green's Fuel delivery truck tank, serving a customer of the West Florida Gas Co.

tives from all branches of the petroleum industry, and also, major fluid meter manufacturers. The very fact that this convention attracted some 175 visitors from 16 states without the slightest indication of the usual convention hullabaloo and entertainment certainly would indicate the significant importance with which it was regarded. All sessions were conducted on frank and impartial lines with no sales presentations but in strictly university procedure. The prime objective back of this meeting was simply to accomplish every practical improvement in the application, design and construction of fluid meters for all petroleum products.

The data and information gained from this cooperative effort is also of advantage to the liquefied petroleum gas dealer. Because of it

we're helping you

IN '41, SELL THE ONE THAT'S DIFFERENT!

SPECTACULAR ESTATE
NATIONAL ADVERTISING
IN LEADING MAGAZINES*

tells your best prospects
about this wonderful
new way to cook meats.

*Estate advertising appears
in half-pages and larger,
month after month, this Spring,
in *Good Housekeeping*, *Woman's Home Companion*, and
Better Homes & Gardens ...
plus a full-page in color in *Life*.



CASH IN ON THE ESTATE **BAR-B-KEWER**

Greatest gas range improvement in years

Sell the range that's easiest to sell in '41 ... the one range that's absolutely competition-proof! The new Estate Range with the sensational Bar-B-Kewer ... that grills, or barbecues, whole hams, chickens, rib roasts ... adds an extra oven to the range. Every woman wants it. Only Estate has it.

Wire or write today for the big profit facts on the new Estate with the exclusive Bar-B-Kewer. The Estate Stove Company, Dept. B P N 3, Hamilton, Ohio.

ESTATE *Ranges*

for all types of liquefied petroleum gas (for SKELOAS exclusively in the Middle West)

MARCH-1941

53

the responsible meter manufacturer is able to make recommendations and provide equipment which has been thoroughly tried and proven for his particular type of service.

Liquid Gallon Measurement

With the early usage of tank trucks for the delivery of liquefied petroleum gas, attempts were made to measure these fuels by simply installing a fluid meter in the transfer line from truck tank to the plant served. The common method of making this transfer was to simply create a lower pressure in the receiving tank than that existing in the supply tank. Usually all necessary was to permit a certain amount of vapor in the receiving tank to be discharged into the atmosphere. With these first metering attempts many believed that the conventional gasoline meter, or even water meter, would prove satisfactory. Experience quickly demonstrated otherwise. Aside from mechanical failures within the meters themselves, because they were not designed for this service, a major difficulty arose, namely the inaccuracy of the readings due to vapor registration. A fluid meter of the positive displacement type, which is the accepted standard, accomplishes measurement by displacing volumes. If the commodities passing through the meter are liquid, or vapor, or both, their combined or individual volumes will be measured and recorded. Naturally if a fluid meter is to be of value in the distribution of liquid petroleum gases, it must provide accurate

measurements of liquid gallons, only, since the liquid gallon is the standard unit of sale.

Experience has demonstrated that to prevent vaporization within the meter, or the passage of such vapors through it, the following is essential: Some mechanical means must be employed to insure maintenance of a pressure on the immediate outlet side of the meter during the complete transfer cycle that will be greater than the pressure in the tank from which the fuel is withdrawn.

Various Systems Worked Out

There are several methods of accomplishing this result. As to the mechanics, these will not be mentioned since most of the manufacturers of liquefied petroleum gas metering equipment have worked out various systems which they claim are comparable, at least, in performance.

In any event, experience has demonstrated that to obtain satisfactory liquefied petroleum gas metering results it is necessary to use some mechanical means for transferring the liquid through the meter into the receiving tank. The use of special pumps is the most common method of making this mechanical transfer from either bulk or storage tanks. Some worthwhile points might be made here in reference to the pumps, but since this discussion is limited to the measuring of the product the speaker will refrain from discussing this subject.

Another method of transfer which seems to find its best field

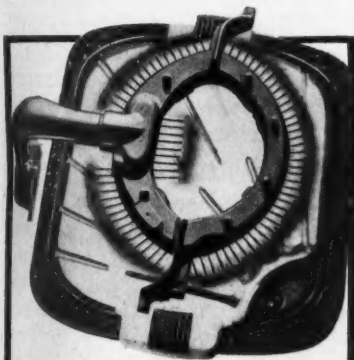
ROPER

GAS RANGES

Ring the Bell



WITH MANY NEW FEATURES AND SALES PULLING PROMOTIONS



New "GLO" BROILER BURNER

Provides penetrating "Infra-Red" heat that speeds up broiling as much as 20%. Add to that the "Staggered Top," "Peasant-Ware" Broiler with Serve Tray, and other exclusive refinements and you have FEATURES THAT SELL.

Ring the bell for kitchen freedom—and housewives will help you ring your cash register. More than ever before, Roper Gas Ranges bring you a combination of profit-making sales promotional plans and new, improved features.

WRITE OR WIRE FOR DETAILS

Ask about the "Let Freedom Ring" campaign, a sales-puller that is really timely.

GEO. D. ROPER

CORPORATION

General Sales Office and Plant: Rockford, Illinois

ROPER GAS RANGES FOR ALL GASES INCLUDING LIQUEFIED PETROLEUM GAS

MARCH 1941

in bulk plant operation is designated as the vapor differential system. The cycle of operation consists in lowering of pressure in the receiving tank, by withdrawing vapor from same and compressing it then discharging it into the supply tank. A higher pressure naturally results in the supply tank than in the receiving tank which, obviously, forces the liquid through the transfer lines. With this system, however, it is necessary to maintain a pressure within the meter which will be constantly at least several pounds above the vapor pressure of the commodity so as to insure accurate measurement. Some mechanical means will need to be used on the immediate outlet side of the meter so as to insure this pressure.

Suitable Precautions

In planning a transfer and metering system for either bulk storage or truck tank, experience dictates a few precautions. Use full size suction lines from storage to the pump, avoiding reduction in pipe size below that of the pump opening. Valves and fittings should be of such design as not to produce a venturi effect in the line. Of special importance, select an excess flow valve for suction line which has a capacity well above the maximum capacity of pump at top speed. Failure to observe any of these points may result in a starved pump suction with consequent rapid wear of pump and vaporization in suction line. Good practice seems to further indicate that discharge lines should also be, at least, full pump size throughout

the entire meter system. If it is desired to reduce pipe or discharge line size, such reduction can best be made beyond the control valve on the discharge side of meter.

On bulk plant installation it is generally advisable to locate metering equipment as near to point of discharge as possible. In all cases, pumps should be equipped with by-passes and safety relief valves. Now that the liquefied petroleum gas truck tank seems to be going modern rapidly with streamlining, skirting and other effects, which makes it not only more serviceable, but also a rolling advertisement of powerful effect, metering and pumping equipment can be carried beneath catwalks or in the rear compartment. Apparently, the LP-Gas dealer is about to catch up with the modern fuel oil dealer and is now acquiring equipment as fine in appearance as any fuel oil equipment on the roads today.

Follow Manufacturer's Instructions

With the observance of these few suggestions and precautions the LP-Gas dealer can certainly undertake the metering of his products with complete confidence and results. It is timely to give a word of counsel here. By all means, follow the instructions of the manufacturer of the metering equipment or consult a reliable authority on such equipment. Many complaints are due to failure to observe this point, and not because of defects in the metering systems.

In consideration now of the advantage of metering liquefied petroleum gases, it should hardly be necessary to mention that meters

DOUBLE FEATURE

THOMAS TRUCK **TODAY**
of *Keokuk* PRESENTS . . .

A NEW DOUBLE-DUTY HAND TRUCK FOR THE BOTTLED GAS INDUSTRY

At last . . . an all purpose, one-man hand truck for moving both gas cylinders and appliances. No more back-breaking hand lifting. Equipped with 10-inch ball bearing cushion-pneumatic wheels **guaranteed to prevent damage to lawns** and provide easier rolling on hard surfaces.

**PRICE
ONLY
\$12⁹⁵**

(1½" Webbing
strap—\$1.50
additional)

Tapered body gives operator ample room between handles. Cradle constructed to accommodate any size cylinder up to 100 pound capacity. Larger sizes at small additional cost.

Wide bottom flanges give perfect support for appliances. Web strap (optional) holds appliance rigidly to truck.

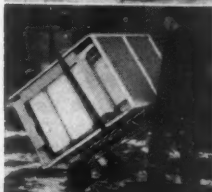
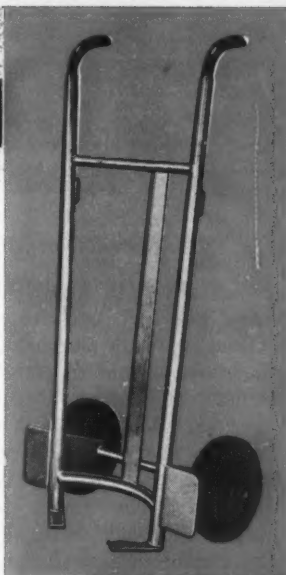
Rounded handle grips permit skidding cylinders or appliances from end of delivery truck without damage.

NOTE . . . DOUBLE DUTY is extremely valuable at bottling plants and warehouses for easy, time-saving movement of cylinders in various plant operations.

ORDER YOUR "DOUBLE-DUTY" TODAY

THOMAS TRUCK AND CASTER COMPANY
4130 MISSISSIPPI RIVER KEOKUK, IOWA

MARCH-1941



are not a panacea or cure for all evils. That they do have a very definite place and can be of invaluable service to any dealer, large or small, appears to be definitely established by the experience of those dealers who are now using meters.

Arguments for Meters

Contact with many dealers, who have not yet become meter conscious, reveals that the best have their occasional disputes with customers regarding accuracy of deliveries. And perhaps rightly so, for the average user must have a lot of faith when receiving a fuel delivery. The truck tank driver stops his truck tank along side of the customer's system, hooks on a hose or two, may or may not start up a power take-off pump. After a little while, the operation is reversed, the truck is driven off. The customer believes something was put into his tank and he hopes he received all he is charged for. Perhaps his system is equipped with some sort of gage, but how many customers understand them? It is recognized that the customer cannot see the fuel going into his tank. Perhaps it is because everyone buys gasoline from a service station where a similar transaction takes place. Every man, woman and even child can read a gas pump dial. America has recently become much meter-minded. All utilities, such as electricity and water are sold via meter. Counters of modern meters for the liquefied petroleum gas industry are as easily read and understood. It is possible to

go even further and issue the customer a printed ticket of his transaction showing the exact number of gallons delivered.

Surely, it is important to keep the customer's good will and faith. The fuel oil dealer some years back found that meters not only helped to keep this good will and faith but also offered a good sales appeal to new customers.

Meters afford a positive means of maintaining an accurate record of all receipts and disbursements. They not only accurately measure each gallon, but count and record total quantities measured. The use of metering equipment that includes the delivery ticket printing device enables the dealer to give his fuel business a touch of dignity which makes the customer think of his service as in a class with other household utilities.

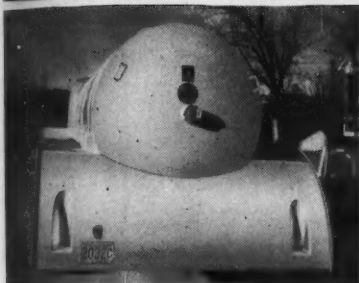
Philadelphia Branch Opened By General Controls Co.

Announcement is made by General Controls Co., Glendale, Calif., of the opening of a new factory branch office at 4515 North Broad St., Philadelphia, Pa.

In charge of the new office will be George Le Fevre, for the past three years sales engineer in the company's New York City branch.

The establishment of this new branch enables General Controls to carry complete stocks of motorized and solenoid valves and other automatic controls for industrial application, gas and oil heating and for refrigeration in Philadelphia and, in conjunction with the company's branches in New York City and Boston, to serve directly all points on the Eastern seaboard.

BANKS TANKS DOMINATE



Why not look to the leader for better tank values? For the second time this year, due to the rapid increase in production, it has become necessary to enlarge our plant. October, 1940, we sold 900 Economy Butane plants alone not including Truck Tanks and other fabrications. You profit from our tremendous buying power and large production. "Tanks by Banks" are A.S.M.E. code built, underwriters approved. Inspected by the National Board Inspector employed by Ocean Accident and Guaranty Corporation Ltd.

Butane Propane—

- ★ Underground Tanks
- ★ Bulk Storage Tanks
- ★ Skid Tanks
- ★ Truck Tanks

Phone, write or wire for complete information and prices.

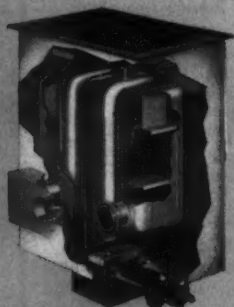


DALLAS TANK

AND
WELDING COMPANY, INC.
201-5 W. COMMERCE ST. DALLAS, TEXAS

MARCH-1941

WHEN THE "FLIVVER"



FLOOR FURNACE...

Exclusive design and features save fuel, distribute heat uniformly. Fully vented for efficiency, safety, comfort.



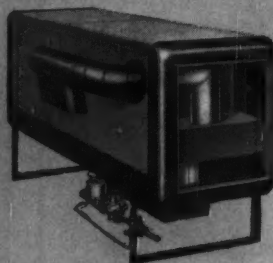
FORCED AIR UNIT...

For small home. Warm air in winter, ventilation in summer — always healthfully filtered, vented.



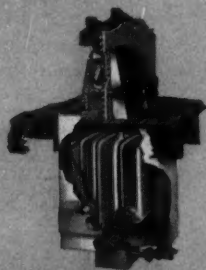
ZONEAIR UNIT...Heats,

circulates, filters, ventilates and humidifies — automatically. Services one room, a wing or an entire house.



SPACE SAVER UNIT

...A forced air heating unit for the home, shop or industrial plant where space is an important factor.



DUPLEX FURNACE...

One furnace servicing two areas, circulating comfortable, vented heat from both sides of wall. Economical, easy to install.



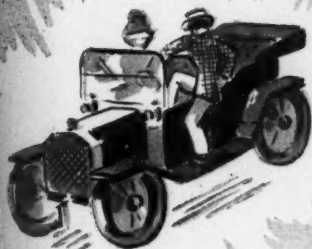
MODERN CONSOLE

HEATER... Combines beauty, utility, economy. Choice of three harmonizing baked enamel finishes; six sizes.

PAYNEHEAT



HAD ONLY ONE DOOR



- Payne WAS A
VETERAN IN GAS
HEATING...AND
SINCE 1928 HAS
BEEN A LEADER
IN L. P. G.

For more than a quarter-century, PAYNEHEAT has meant gas heat at its best. And PAYNE pioneered too in L. P. G. (Original PAYNE L. P. G. units are still operating satisfactorily after 13 years!) ☆ Among the first units tested under

**PAYNE
"A" VENT**
Aluminum inner-tube construction. Fast heating, fully insulated, firesafe and weather-proof, acid-resistant, leak-proof joints, easily installed. Our answer to the demand for a perfected vent.



the new A.G.A. requirements for Liquefied Petroleum Gases were these PAYNE units. They are ready for your territory, your customers, custom-adjusted to your fuel. ☆ Perhaps you too can profit by the sound engineering and modern design of PAYNE Furnaces—there are a few PAYNEHEAT dealerships open in L. P. G. territories. Write J. H. Keber, Sales Manager, for our liberal dealer offer.



Payne FURNACE AND
SUPPLY CO., INC.
BEVERLY HILLS, CALIFORNIA



LP-Gas storage, bottling and pumping station of the Borelli Hardware Co. at Okarche, Okla., with company trucks loaded for delivery and service.

Gas Plants Dot Back Yards of Okarche, Okla.

ABOVE-GROUND propane tanks, which average 224 gallons capacity each, dot nearly every back yard in Okarche, Okla., a town of about 500 population on U. S. Highway No. 81, 13 miles north of El Reno

There is no natural gas distribution system in Okarche but Francis and George Borelli, joint owners of the Borelli Hardware Co., there, give the town all the advantages of gas service through these above-

ground propane individual systems.

Francis Borelli uses propane for every fuel purpose in his home and often takes prospective customers there to demonstrate the advantages of this service. He also has an above-ground propane tank back of his hardware store building from which his store is heated and connections are made to gas ranges and other appliances on his floor for demonstration purposes.

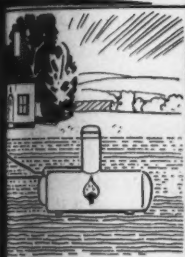
The Borellis recently added LP-

Enjoy More Profits with **HYDROGAS**



PATENTED FEATURES

HYDROGAS offers you an opportunity to sell a System possessing many important features not offered by others. Covered by twenty-six patents issued and many others still pending, **HYDROGAS** Systems are the most dependable underground L. P.-Gas systems available today.



PROVEN OPERATION

HYDROGAS Systems, introduced more than seven years ago, pioneered in the underground L. P.-Gas field. The patented Vaporizer and Re-Vaporizer assure successful operation at low atmospheric temperatures and during periods of heavy withdrawals thus giving the user uninterrupted service and saving the dealer unnecessary service calls.



CONSUMER DEMAND CREATED

No other L. P.-Gas System is carrying on as consistent an advertising program as is being conducted by **HYDROGAS**. Leading magazines are regularly carrying advertisements to establish **HYDROGAS**, to create consumer demand and to make sales easier for dealers.



DEALER COOPERATION

A merchandising program is available to **HYDROGAS** dealers that includes a fuel and insurance plan, attractively printed advertising, store display material, sales and service manuals, outdoor signs and other valuable helps that make for easier sales.



PROFIT WITH HYDROGAS

You will find that selling **HYDROGAS** Systems is easier because of their public acceptance; your customers will be more satisfied because of their dependability, and you will make more money because you will make more sales. We will be glad to hear from responsible dealers who are interested in a **HYDROGAS** franchise.

SOUTHERN STEEL COMPANY, SAN ANTONIO, TEXAS

Gas chicken brooders to their stock. One of these is connected to fuel lines in the store for the purpose of showing customers the quick, clean, dependable, safe, easily regulated and even heat provided by LP-Gas for these brooders. A number of these already have been sold and the firm is expecting a sub-



The Borelli's do some distributing business in their territory. Here, Francis Borelli, left, is showing a LP-Gas space heater to B. D. Anderson, who lately became local dealer in LP-Gas appliances for the Borelli's in Waukomis, Okla.

stantial increase in sales of these appliances during the present year.

After spending many years building up a substantial hardware business in Okarche and vicinity, the Borellis, in 1935, saw the need of LP-Gas service in the community. They ventured on a small scale, at first stocking five bottles of propane and two regulators. How the propane side of their business has

grown is indicated by the statement of Francis that during 1940 they sold 60,000 gallons of propane in cylinders and 60,000 gallons in above-ground tanks. They also enjoy a nice annual revenue from propane cylinder placed in homes on a monthly rental basis.

Finding that many household butane tanks were in service in the rural areas about Okarche, the firm decided, in the Summer of 1940, to supply gas to these systems wherever possible. Francis Borelli said that within five months after expanding into the butane field the firm sold 50,000 gallons of butane, and expects to dispose of 120,000 gallons during 1941.

"We know practically everybody in our territory, and being close at hand can supply and service these butane systems to advantage and keep our customers satisfied," he said.

The company recently purchased a modern delivery truck, equipped with twin tanks of 608 water gallons capacity each. One is marked for propane and the other for butane, but the fuels can be interchanged in them. At its storage, cylinder filling, and loading station, just outside the southeastern limits of Okarche, the company not only supplies its own needs but takes care of fuel and cylinder needs of a number of other dealers in the territory. The propane storage tank has a capacity of 1700 gallons and the butane tank, 2600 gallons. The cylinders are filled with 100 lbs. of propane.

When asked how he built up his LP-Gas business Francis Borelli said: "Primarily because we are

HIGH EFFICIENCY - INDIVIDUALIZED HEATING
UNUSUAL ECONOMY - MINIMUM FLOOR SPACE

FRASER **CABINET** **HEATERS**

***Proved performance with
forced air circulation
assures greater comfort***

SCHOOLS—CHURCHES
AUDITORIUMS
SHOPS—STORES
LODGE ROOMS

In all sections of the country high heating efficiency, quiet operation and individual heat and ventilation control, regardless of outside conditions, have made Fraser Cabinet Unit the preferred L P G equipment.

Fraser Cabinet Units embody all the superior materials, advanced engineering, beauty of appearance, operating economy, and easy, low-cost installation for which Fraser products are justly famous.

Pre-testing each unit with L P G fuel under actual operating conditions assures maximum performance and exceptional freedom from service calls.

L P G distributors will find Fraser Cabinet Unit a load-building heater that justifies their sincere recommendation.



***It's the inside
of the furnace
that counts.***

Write today for illustrated data and specification sheets.

H. R. BASFORD CO.

DISTRIBUTORS

SAFETY - LOS ANGELES

FRASER

GAS HEATING EQUIPMENT

FRASER FURNACE CO.

MANUFACTURERS

STOCKTON - CALIFORNIA

well known all over our territory, and before adding LP-Gas equipment and appliances to our lines, had acquired many satisfied customers in our hardware business. Usually I remain in the store to demonstrate and explain our service there, while George spends most of his time in rural districts making contacts and sales. We have made it a point to learn all we can

about the LP-Gas business so that we can answer most questions intelligently and satisfactorily. We answer service calls promptly, make installations that are safe and that will give continuous satisfaction."

The Borelli delivery truck is operated by Joe Busche, who is licensed by the state, sells gas and sees that all appliances are operating in efficient condition.

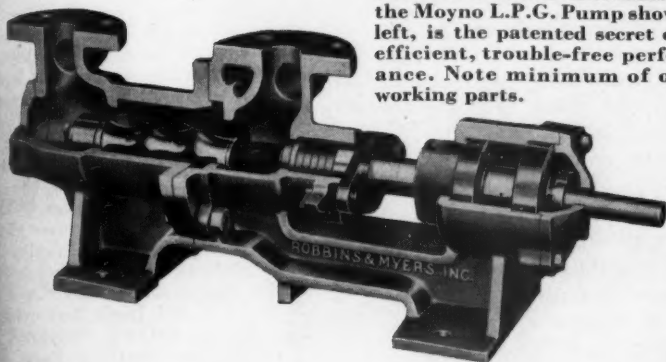


Carl Harmon, chef for the Kellogg Co., Battle Creek, Mich., superintended the serving of 15,000 frankfurters, 8000 buns, 50 gallons of coffee, 100 gallons of chocolate milk and 10 gallons of barbecue sauce to 5000 company employees and their families last Fall. Of course, LP-Gas was used exclusively, and it was furnished by H. E. Babcock, Shellane distributor at Battle Creek. Photograph through courtesy of "The Microphone" and Shell Oil Co., Inc.

"Made To Order" for Butane and Propane Handling

MOYNO L.P.G. PUMPS

Rotor and stator mechanism of the Moyno L.P.G. Pump shown at left, is the patented secret of its efficient, trouble-free performance. Note minimum of other working parts.



WHEREVER there's a butane or propane handling job to do, a Moyno L. P. G. Pump saves you time and money. From tank car to storage tank . . . from delivery truck to consumer containers you get gentle, uniform, metered flow at constant pressure and with velocities not over 22 to 23 feet per second. Displacement is so positive and suction so powerful

that tank cars can be pumped entirely dry. Turbulence is reduced to a minimum . . . vapor locking is eliminated. Investigate this new, safe, economical and trouble-free way of handling *your* pumping jobs today as hundreds of Moyno users are now doing. Write for descriptive folder and prices. Specify whether you handle butane or propane or both. *Address Dept. I.*

ROBBINS & MYERS, Inc.

MOYNO PUMP DIVISION



SPRINGFIELD, OHIO

MARCH 1941

Construction Engineers Want More Facts About LP-Gas

By RICHARD K. WERNER
Consulting Engineer, Forth Worth, Texas

SINCE the advent of butane gas its acknowledgement as an efficient, economical and convenient fuel, its application becomes to the engineer and architect of ever-increasing importance.

The writer recently used butane as fuel for the main kitchen, the diet kitchens, laboratories and for an emergency generating plant of a new \$500,000 tuberculosis sanatorium in Louisiana, the location of which is remote from any existing natural gas distribution system.

During the planning of this installation it became rather apparent that there is little or no technical data available for such undertakings from distributors and dealers, whose experience seems mainly confined to the installation and maintenance of small domestic applications. The detail inquiry in the use of butane for the various appliances involved consumed an unusual amount of time and effort, which in the interest of the industry should be eliminated.

In the design of central heating systems for rural schools, country estates, ranch houses, etc., the use of butane has been frequently considered by me in the past, but has in most cases been abandoned in favor of oil or other fuels due to lack of a reliable, adequate tech-

● Here is an arresting challenge to the LP-Gas industry. A construction engineer, designing heating plants for large institutions and using butane in his own kitchen range, does not know that burners and controls and thoroughly safe and appropriate equipment is available for all forms of furnaces, floor and wall heaters and other appliances burning liquefied petroleum gas, nor that this fuel is the most economical in the long run, and his efforts have failed to find convenient or adequate sources for full information. Likely, there is scarcely a dealer or distributor in the country but who could supply the needed facts, but evidently the construction engineer, the architect, the builder have often been overlooked as avenues for developing new business. Possibly, after reading this article, you will see the value of visiting those in your community who directly control or influence new construction of homes and public buildings.—Editor.

nical information, even when the use of butane for kitchens, etc., was a foregone conclusion.

For the above stated reasons the writer in his own home—outside the city limits—is using butane only for the kitchen range, while oil is being used for the heating plant. Provisions, however, are made for the future use of butane



RELIANCE REGULATORS

Assure Uninterrupted Service for Liquid Petroleum Gas Appliances

**PIONEERS
IN THIS
FIELD**

*The American Meter
Company invites you
to investigate the out-
standing advantages
of Reliance Regulators
for Bottled Gas con-
trol before you leave
the Convention.*

Reliance Regulators are available for large and small installations with automatic control of multiple cylinder assemblies. They are safeguarded by a safety seal. Two-step reduction eliminates the possibility of high pressures getting into the appliances.

Reliance Regulator Corporation, 1000 Meridian Ave., Alhambra, Cal.

MARCH 1941

in the heating boiler whenever absolute safe and satisfactory burners and controls are assured; at which time tests of comparative economy on degree day basis will be conducted.

It is noteworthy that only very



Richard K. Werner, Fort Worth consulting engineer, who wants more information on LP-Gas and equipment.

few manufacturers of gas-fired cast iron radiators or other heating appliances, unit heaters, air-conditioners, water heaters, etc., give any information in their catalog data regarding the suitability of their equipment or the subsequent output rating for butane. The same is equally true on the part of manufacturers of cast iron sectional boilers and the manufacturers of attendant accessories, such as burners and controls.

It is also highly desirable that certain minimum requirements be

established regarding vaporization under certain climatic conditions and that necessary friction of flow data be made available for the proper design of butane gas distribution lines.

To make such complete data available for the engineer and architect will undoubtedly result in a speed-up of the use of liquid gas and will, in many cases eliminate the installation of costly duplicate equipment for other fuels.

It is here suggested that the liquid gas industry in cooperation with the Institute of Boiler and Radiator Manufacturers, the Steel Heating Boiler Institute, the American Gas Association, the National Bureau of Standards and other national societies and associations undertake the necessary research and compile adequate information for the use of engineers and architects.

It is the writer's opinion that the manifold use of butane-propane has hardly been touched and that the availability of intelligent data on the subject will constitute another milestone in our American way of life by assuring economical, safe, uninterrupted, and dependable gas supply to thousands of American homes and institutions outside the realm of established public utilities.



George Taylor Will Sell LP-Gas in New Store

George Taylor, for several years operating an appliance store in Balsam Lake, Wis., has opened a new store where larger space for display is available. A bottle gas agency has been added to his other lines.

*"Jack, I'm so glad we bought a Dearborn.
Susan just loves to play on the warm floor"*



DEARBORN GAS HEATERS

*have the features that sell . . . the Quality that lasts
See Them at the L.P.G.A. Convention*



DEARBORN
GAS HEATERS
A.G.A. APPROVED
LIQ. PET. GASES

Palmer House, Chicago, Feb. 24-25,
or write for handsome FREE Catalog.

See . . . FEEL a Dearborn
COOL-CABINET Demonstration.

DEARBORN STOVE COMPANY

LOS ANGELES

CHICAGO



REGO
COMPACT UNIT

qualified
assembly
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Specify **REGO**

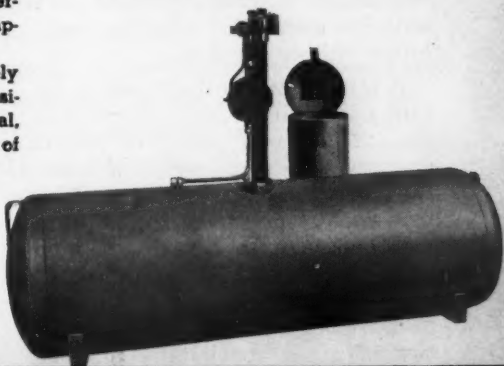
LOW COST-DEPENDABLE EQUIPMENT

Reliable design and high quality construction are responsible for the trouble-free performance of the Rego Compact Unit. It cuts installation and maintenance cost of the complete system.

Only one connection is required for the entire gas tank. This exclusive Rego feature eliminates pipe fittings which increase danger spots for leaks. Insures real protection for all your underground bulk system installations. Safe and approved.

The Rego Compact Unit is sold exclusively through licensed manufacturers who are in position to furnish complete systems meeting national, state and local requirements. Write for list of licensed manufacturers.

The Rego Compact Unit provides all the safety and utility features required for proper functioning of an underground system. Covered by Patent Nos. 1662291, 2005931, 2098119, RE20624, 2121675, 2121673. Other Patents Pending.



Listed and Approved by
Underwriters' Laboratories

The **BASTIAN-BLESSING** *Co.*

258 E. Ontario St.

Chicago, Ill.

Pioneers in equipment for using and controlling high pressure gases.

It's Easy To Find a Prospect, But Can You Make Him Sign?

By LEONARD WARDEN

Warden's Butane Gas Service, West Memphis, Ark.

SELLING is creating a sale.* Selling in a specially selling business such as we are engaged in is building, developing, creative work. It's not order-taking. It's not waiting for someone to come in to us to buy. It's taking our creative sales story to the prospect and creating in him the desire for a butane gas installation in his home—a desire so strong that he parts with his money for what an installation will do for him.

A few years ago there was no butane gas business as we know it today. There was plenty of butane gas, and there were plenty of homes that needed it. It took a selling man with strong imagination and a full appreciation of what butane gas would do in a home to make the first sale. That was the creation of our business. That was the creation of a use for butane gas that had not existed before.



LEONARD
WARDEN

Selling butane gas installations, then, is telling a prospective buyer the story of what one will do for him. It is a matter of convincing him that the service of such an installation will render him and his family a service worth more to him than the money it will cost, or worth more to him than anything else he may desire to buy for the same amount of money.

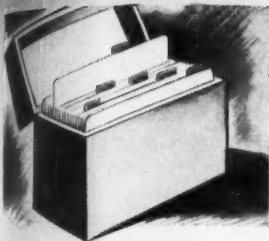
I have heard many people say that salesmen are born, not made—that one has to be a natural-born salesman to make good in the selling game.

I do not believe this. I do not say that some men do not have more selling talent than others, but I do say that any man who can learn the product and equipment he is offering for sale, knows what this equipment will do for the prospect he is trying to sell, and learns how to tell his sales story convincingly, can make a selling man out of himself.

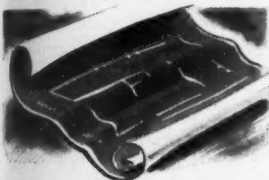
I have heard salesmen say, "I made so-and-so buy." Maybe that is true, but that is not the kind of selling I know anything about. You have heard people say "I won't be sold. I will buy when I am ready." I believe that this is about the way most of us feel about being sold anything.

It is selling this kind of prospect

* A paper delivered before the National Butane Gas Co. convention in Memphis, Tenn., Dec. 17.



DOMESTIC SUPPLY METHODS — Sales methods, marketing information, construction of plant facilities, are available to domestic suppliers who are customers of Shell.



INDUSTRIAL USES — Shell engineers are thoroughly experienced in all industrial heating application such as heat-treating and high temperature work. They are prepared to help you in design of new equipment, development of new processes.



COMMERCIAL USES — Shell engineers have helped develop processes for the use of liquefied petroleum gas in such widely varied services as gas enrichment, internal-combustion engine fuel, hotel kitchen and dining car fuel, etc.

NO MATTER WHAT THE PROBLEM...

Experience in every use is at your command when you specify Shell Liquefied Petroleum Gas _____

THROUGH years of experience, Shell has accumulated a wide variety of information on the uses of liquefied petroleum gas.

The breadth of this experience assures you of competent advice on such diversified subjects as equipment design, application methods, storage and handling methods, construction of facilities, and marketing information for domestic suppliers.

The length of this experience assures you of the soundness of the service offered you by the Shell engineering staff.

Shell's experience, Shell's technical service are as near to you as your phone. Simply call the nearest Shell office.

SHELL LIQUEFIED PETROLEUM GAS

Offices of SHELL OIL COMPANY, INCORPORATED • NEW YORK, SAN FRANCISCO • Also ALBANY • ATLANTA • BALTIMORE • BOSTON • CHICAGO • CLEVELAND • DETROIT INDIANAPOLIS • JACKSON HEIGHTS, N. Y. • MINNEAPOLIS • NASHVILLE • ST. LOUIS

MARCH - 1941

that I am talking about today. Not the high pressure, overbearing, smart-aleck type of salesmanship that would say anything to get the sale.

One of the best selling lessons I ever got in my life was serving on a jury. Here are the lawyers on each side, the judge, and the jury. Before any good lawyer presents his client's case he makes a thorough investigation of his client's position. He must have all the facts in the case before presenting it to the judge and jury.

In a sale I like to think of my prospect as the judge and jury—they are the ones to decide the case—they buy or do not buy. I like to think of myself as the lawyer, and that the old wood range and coal range or wood heaters or other out-of-date methods as being on trial and that I am arguing the wonderful advantages of butane gas over the older methods.

How well I have prepared my case and how convincingly and enthusiastically I tell my story, determines whether the prospect decides in my favor and buys a butane gas installation.

Selling is largely a matter of preparation and hard work. We must train ourselves.

Selling a butane gas installation is quite a different thing from selling a package unit like a car, refrigerator, radio, etc. Selling a butane gas installation calls for a general knowledge of heating—comparative value of gas with other methods of heating. It calls for a knowledge of gas cooking as compared to other methods of cooking. It calls for a knowledge of water

heating methods as compared to other methods of water heating. In other words it calls for knowledge of various equipment.

This information and knowledge you must get because it must become a part of your sales story. I am not going to attempt to give you that information here.

I will, however, break down a complete sale and analyze it to see if we can put our hand on definite things to do to create a sale. There are very definite steps that must be made before a sale can be concluded, whether you as a selling man make all of these steps or someone else makes them for you. Oftentimes your users help you make these steps by partly or largely selling the job for you. These steps are:

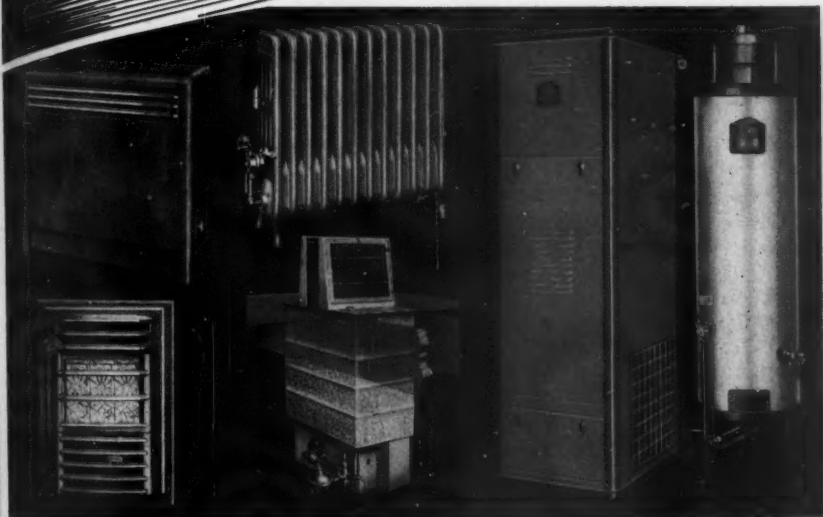
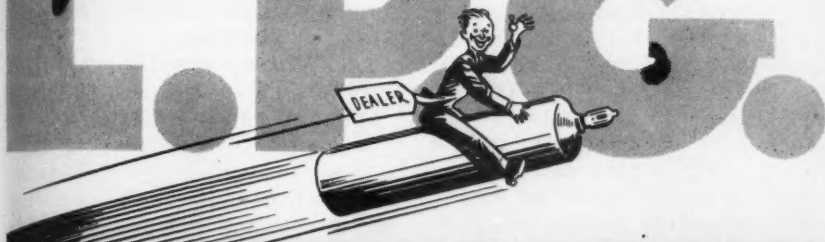
1. Get Prospects.
2. Make the approach.
3. Make an investigation.
4. Show the prospect what a butane gas installation will do for him.
5. Present your proposition.
6. Answer objections.
7. Justify your prospect's decision to buy now.
8. Close the sale.

Now let's take each one of these steps separately and see what part it plays in developing and creating a butane gas sale.

1. *Getting Prospects.* First, let's define a prospect. As good a definition as any is—"A prospect is anyone who has a need for a butane gas installation and who has the money or credit with which to buy and who has shown an interest in this kind of a system for his home."

A suspect is anyone we think may be interested and might be able to buy, but we don't know.

Pacific



★ **WHAT A MARKET ! . . . 325,000 new home users of L.P.G. in 1940 !** If you missed getting an extra big share of this booming business it's probably because you didn't merchandise "*Pacific*" L.P.G. Heating Appliances . . . *the Complete, Top-Grade, Right-Priced, Fast-Selling Line . . .* guaranteed products of a 28-year old manufacturer of Gas Heating Appliances. ★ A few "*Pacific*" Dealerships are available. See us at the Chicago L.P.G. Convention, or write us direct today. Get a "*Pacific*" Dealer's share of the fast growing L.P.G. Heating Appliance business in 1941 !

PACIFIC GAS RADIATOR CO., Huntington Park, California

MARCH-1941

To get prospects we must call on suspects because that is the only way we can definitely know whether or not we have a prospect.

There are a number of ways of getting prospects:

- a. From Our Users.
- b. From Newspaper Advertising.
- c. From House to House Canvassing.
- d. From Mass Demonstrations.

We have to have a prospect before a sale can be made, and how well a selling man can find prospects and how many he can find will, of course, have a bearing on his success or failure in this business.

2. *Making the Approach.* Often-times a first impression is the last impression and it may be said that frequently a sale is lost or made in the approach.

Let's see what part the approach plays in creating a sale. The purpose of the approach is:

- a. To get the prospect's interest.
- b. To get the opportunity of telling the prospect your story.
- c. To get an appointment—to arrange for a proper setting now or later.
- d. To sell yourself—to create the impression to the prospect that you know your business.
- e. To arouse the curiosity of your prospect.

Certainly the approach is not the time to attempt to sell your prospect, but just to tell him enough to make him want to hear your whole story at a time and place that will enable you to do a complete selling job. When you begin your sales story, you want a place where neither you nor your prospect will be interrupted, and where you can

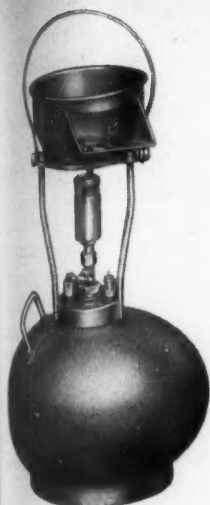
tell your whole story. Usually that is in the home before both the husband and wife. Surely you don't want to attempt selling a prospect on the street when his friends are passing and interrupting your conversation, nor any place or time when your prospect cannot give you his full attention.

3. *Making the Investigation.* Here is a step that most of us overlook. We must investigate to find out:

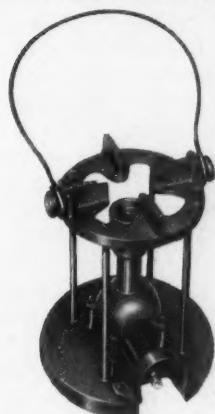
- a. If the prospect is able to buy, and on what basis.
- b. If the prospect has a need for butane gas installation and what that need is.
- c. What type of equipment your prospect needs.
- d. What special phase or feature of a system appeals most to the prospect.
- e. If the prospect is a married or single person.

4. *Explaining the System.* In this part of the sale a good salesman will always think in terms of what butane gas will do for the prospect. Talk in terms of what the prospect's installation will do for him. Help him to visualize the installation in his home and try to make him to think in terms of his water heater, his heating equipment, his gas range—his whole installation operating in a manner to bring him comfort and convenience he has never known before.

The selling man must take up each particular part of the equipment he is endeavoring to sell his prospect, and show what equipment and the appliances will do in the prospect's home, always comparing and contrasting them with that which he already has. Remember,



Model P-3



Model P-2



Model P-5

RANSOME PLUMBERS FURNACES

Here are three plumbers furnaces which operate on butane or propane and are "hot numbers" for melting lead and heating irons. They cover the gamut of quality and price range and plumbing supply houses find them fast movers. Write for descriptive leaflets and prices on our complete line of plumbers furnaces.

RANSOME COMPANY

Designing and Constructing Engineers

4030 HOLLIS STREET, EMERYVILLE, CALIFORNIA

Ransome

we can only understand advantages by contrasting them with other methods or things.

Bear this in mind, the prospect is continually thinking of the money it might require to buy a butane gas installation and it is the selling man's job to make that installation mean more to the prospect than the money he will have to spend for it.

To really get the story across to your prospect requires that the salesman feels and knows what he is saying. He must have a deep-rooted feeling himself that a butane system will mean more to his prospect than anything else he can buy for the same amount of money. He must be thoroughly sold himself on each part of his story.

If you have ever talked to a happy butane gas user and have felt the enthusiasm that he radiated in telling why he so well liked his plant, you will know what I mean. I oftentimes visit users so I may get a renewed enthusiasm over the product I am selling.

After you have told your story in the most complete way you know how, the next step in a sale is:

5. Presenting Your Proposition. Through your investigation you have determined what equipment it will require to take care of the needs of your prospect.

In showing a prospect what a butane system will do for him you have shown him the advantages of the equipment and what it will mean in terms of service. The step of presenting your proposition naturally follows, and is now a matter of listing the equipment on your order blank, writing in the price

terms, etc.; explaining fully how your prospect may make the purchase, and when the installation can be made. It is now a matter of asking for the order. But instead of signing the order the prospect begins giving reasons or alibis for not buying. The next step is:

6. Answering Objections. Here is where the selling man really comes to bat. Oftentimes the prospect will turn loose a barrage of objections. You must let the prospect get these objections out of his system and must satisfactorily answer them one by one. Never try to answer them altogether. Oftentimes after two or three objections have been answered satisfactorily, any other the prospect may have had appears to him to be silly and are forgotten.

In the investigation the selling man must ask many questions. In answering objections, he must ask many "why's." When the prospect says I do not like this or that feature, the good selling man asks why, and keeps on whying the prospect so as to get down finally to the real reason, if any there be. A good selling man has got to be a good "why-er."

Now, maybe you have gotten through all of your steps so far. You have a good prospect. You have made a splendid approach. You have made a thorough investigation and you made your prospect want a butane gas system by a thorough explanation of what it will do for him; and he tells you he is going to buy; and that when he does he will buy from you; that you need not worry about the sale as far as anybody else getting it is



"The Master of Flame"

PROVEN IN ACTUAL FIRES and EDUCATIONAL TESTS!

LP-Gas Producers, equipment men and dealers have agreed that DUGAS best answers their "first-aid" requirements for Butane-Propane fire hazards. It's positive protection in petroleum fires, is FAST—HARMLESS—SAFE.

It's Superior Because . . . DUGAS can hit a fire from a greater distance, offering more safety to the operator . . . DUGAS may be recharged easily and quickly in field or plant, offering uninterrupted protection.

YOU NEED DUGAS—WRITE FOR INFORMATION

Dugas Engineering Corp.

332 South LaSalle St., Chicago, Ill.

Ansul Chemical Co. of Calif.

Los Angeles
210 W. 7th St.

Modesto
Box 908

Ansul Chemical Co.

Marinette,
Wisconsin

Paoli,
Pennsylvania

concerned, but he just *won't buy now*.

What then stands in his way? The next step must be taken or else you will fail to create the sale, and this step is:

7. *Justifying the Prospect's Decision to Buy Now*. You have already met each objection or all: your prospect has but before he will buy now his indecision must be changed to a willingness to sign the contract.

Most of us are lazy when it comes to making decisions to act *now*. To put off or to delay a decision is a human tendency. Before your prospect will decide to buy *now* he must have a complete justification in his own mind for making such a sudden decision.

We cannot make our prospects' minds up for them nor can we make our prospects buy, but often we can furnish them with a sufficient justification for them to decide to *buy now* and not put it off until tomorrow or later.

Let's analyze our own selves. For, after all, we are all pretty much alike. We have all bought automobiles or traded in our old cars for new ones and assumed quite a large additional investment. We get anxious for a trade. We want the new car. Then we think about what it costs and how we will have to sacrifice for the next 12 months. Let's see what goes through our minds when we get in this position.

Don't we begin to justify our decision to *buy now* by telling ourselves, and our wives, that the old car is just about shot anyway, that we have to buy a new set of tires and the engine needs overhauling

and we might just as well go ahead and get a new car, anyway? Then we tell our friends to whom we show the car what a big bargain or big trade-in bargain we got. We are merely justifying our sudden decision for such a purchase.

Maybe the justification your prospect needs for his decision to *buy now* is:

a. Just papered the house and shouldn't get it all messed up with coal dust or soot.

b. Getting married and wants butane gas convenience for his wife.

c. Must buy a new wood stove because he needs additional heat.

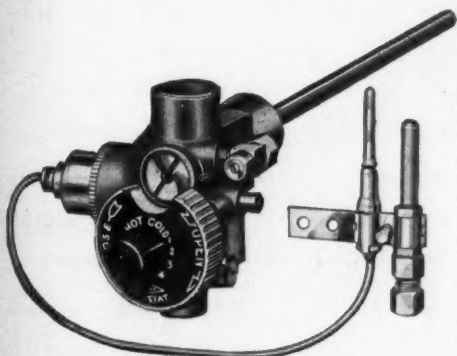
d. Some special proposition you offer for a sale now.

Here is a prospect able to buy, wants to buy, but can't seem to justify in his own mind a sudden decision to *buy now*. So, here's where a creative, imaginative selling man can do his stuff.

8. *Closing the Sale*. If we have completed our job up to here, closing the sale is a matter of getting the order signed. It might require the asking for the order a number of times and the order blank and pencil should be offered your prospect time and time again so that he may have the opportunity of buying.

It would seem to me that the above steps will pretty much cover what builds and creates a sale. The sale is closed, the plant is installed, and the selling man has the happy satisfaction of knowing that he is responsible for having made another family happy in giving it the opportunity to benefit from the use of the great natural servant, butane gas!

An Announcement To The Water Heater Industry



For years the TITAN snap-action thermostat has been recognized as the leader in its field . . .

Equally so the BASO thermo-couple has been accepted as without a peer for safety pilot control . . .

It is therefore with pride and pleasure that we introduce the POLYSTAT . . . a multiple purpose control developed by Titan engineers in collaboration with the laboratories of The Milwaukee Gas Specialty Co.

The POLYSTAT combines in one instrument the TITAN thermostat and the genuine BASO 100% POSITIVE thermo-couple unit together with the necessary manual valves and adjustments.

We sincerely believe that the POLYSTAT will prove to be an outstanding forward step in water heater controls.



THE TITAN VALVE & MANUFACTURING CO.

9913 Elk Ave.,
Cleveland, Ohio

407 Van Nuys Bldg.,
Los Angeles, Calif.

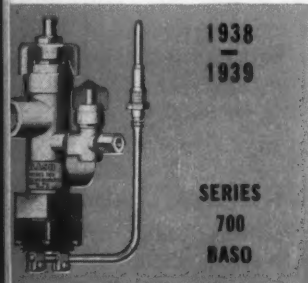
A Pace Ahead



The first thermocouple actuated automatic pilot. The fixed lead model BASO.



The first BASO with detachable couple lead. Valve models with 100% shut-off and flow interruption.



Valve model providing custom built BASOs to the appliance manufacturers' specifications.

Since its first appearance on the market in 1934 BASO has been a pace ahead. Constant research has continued to improve originally accepted and acclaimed designs. The new 800 Series is the latest result of this prolific engineering work.

Outstanding features of this new BASO are—more rapid time of operation, increased flexibility couple leads, and compactness of design.

The new 800 Series BASO valve as shown on the opposite page is die cast aluminum. There is no sacrifice in ruggedness with this reduction in weight and increased capacity has been obtained with a reduction in overall dimensions. This universal model provides various valve styles . . . angle straight through . . . with optional positions of the pilot take-off. All features of other BASO valves are retained, such as safe control of gas supply to the burner during resetting operation, 100% shut-off and a single model for all fuel gases.

There is a BASO for every type of gas burning appliance. Let MGS Co. solve your ignition problem with the original thermocouple actuated automatic pilot.

BASO

1941

A universal valve
model BASO available
in $\frac{3}{8}$ " and $\frac{1}{2}$ " sizes.



FASTER IN ACTION. 100%
SHUT-OFF IN ALL MODELS.
MORE FLEXIBLE COUPLE
LEADS. A 1941 BASO.



POLYSTAT—combines in one multiple pur-
pose control the Titan thermostat and
valve. Manufactured and sold by the Titan
Valve & Manufacturing Co. of Cleveland,
Ohio. The ONLY BASO equipped thermo-
stat available to the water heater industry.

For information on the POLYSTAT, write Titan Valve & Manufacturing Co., Cleveland, Ohio.
For information on the BASO, write the Milwaukee Gas Specialty Co., Milwaukee, Wisconsin.

Hard Work Is Sales Keynote

THE country town appliance man who will diligently apply himself will find there is a growing market at his very door in the multitude of farm and other rural homes.

This is the experience of W. J. Layland, who heads the Layland Plumbing Co., of Cleburne, Texas, a small place setting up in the midst of the cotton and corn lands of the area to the south of Fort Worth. Mr. Layland, as an example of what he has found possible, this season placed 21 modern Roper ranges in farm and other kitchens of his section. He sells an average of 100 butane gas systems in a year around Cleburne, in face of bitter competition from every hand. He keeps gas ranges, water heaters, and other familiar appliances moving along in a steady flow in and out from his little country town plumbing shop.

There is nothing mysterious about the success he has achieved in this profitable addition to his plumbing business, Mr. Layland asserts. He contends he merely has taken some advantage of opportunity as it thumped at his door.

Makes Prospects Gas Conscious

It may all be true that Mr. Layland is slightly more blessed than many dealers since he is in Texas, where natural gas is abundant. However, it is only a nominal part of his business which taps the natural gas user market.

By JOHN D. MUELLER

The developments of recent years, Mr. Layland says, have vastly simplified the problem of sales to the farmer. The locker plant has engendered his wife's desire to have a refrigerator in the home. She also wants a gas range, and water heater, and bath.

Country Fairs Develop Sales

The country fair, Mr. Layland adds, has proved one of his best aids in selling gas appliances to the farmer. It is a place where all go. He keeps a continuous display of gas appliances there when the fair is in progress.

Butane equipment makes it possible for him to make of this display an actual demonstration, not only of the highly efficient operation of such systems, but of the ease of installation.

"There isn't any place I know of where you can do a better job of showing off what you have for the farmer than at his fair," comments Mr. Layland. "He and his wife and all the family are there then, taking in the sights, seeing things they would like to have. You get him when he is really looking around in a buying mood.

"Here in my store, also, I keep ranges all attached to butane equipment. I can light up any time, and show a woman everything she might want to know about a range.

FLORENCE BUILDS PROFITS FOR YOU IN LASTING LPG PAYLOADS!



FLORENCE *Gas Ranges*

FOR LIQUEFIED PETROLEUM GAS

When you sell a Florence, you are selling much more than a top-ranking LPG range. You are selling dependable, easy, trouble-free cooking, year in and year out! That sort of service builds steady profits for you in continuing payloads.

This spring, the powerful Florence national advertising campaign heads those profits your way. In big circulation magazines, it will remind your customers that Florence means "the best there is in cooking"!

Go Florence now . . . for a full line of 13 great LPG ranges that make it easy for you to meet the needs of every possible customer . . . in features and in price! Mail the coupon today.

FLORENCE STOVE COMPANY

General Offices and Plant, Gardner, Mass.; Western Offices and Plant, Kankakee, Ill.; Sales Offices: 1459 Merchandise Mart, Chicago; 45 E. 17th Street, New York; 53 Alabama Street, S.W., Atlanta; 301 N. Market Street, Dallas; and 2730 16th Street, San Francisco.



FLORENCE STOVE COMPANY

Please send me the Florence Gas Range Catalog, prices, and full information about the liberal Florence Promotion Plan for Dealers.

Name

Address

MARCH-1941

I often take in an old range in part payment for a new; and then I usually get the traded one right back to work with some other family. One of the jobs in this sort of selling is to get the people using the equipment. Often the farmer can't afford a new range, or water heater; but will be interested in getting started using equipment within his price reach. I had 14 old ranges on the floor of my store not long ago. Now they all are gone, and I can use some others."

The country dealer who can do so, he says, can go along well by financing his own paper on such sales. The big commercial companies, he cites, usually demand that the buyer have a fixed weekly or monthly income. The average farmer lies outside that group.

"The farmer's income, of course, is seasonal," he explains. "While there are some places where he can buy on such terms, his range is limited. The small dealer who knows his farmers, and knows those who will be able to pay, can often come in where the commercial outfit will not operate.

"I formerly handled my own paper altogether. The rates which the big fellows have established

make it impossible now for me to do so in any great measure. Consequently, I turn over much of mine to them. I still am able to handle my own, however, in such cases where commercial finance will not be available."

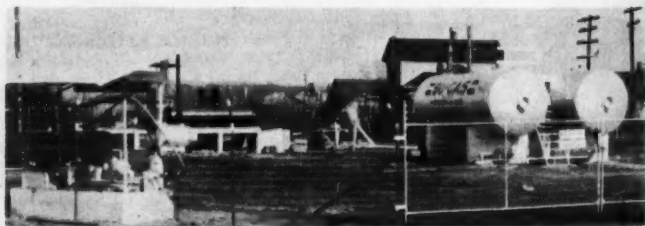
Mr. Layland has found that the most consistently efficient method of building sales of such equipment is through personal contacts. He has experimented with direct and other advertising, but results, he says, have been largely indifferent.

"I can't keep on a string of salesmen, all the time," he says. "In the summer months, when our business is at peak, however, I keep a couple of college boys out in the field at work. They have done well for themselves and for me.

"They are farm boys as a rule, or boys who know the farmer and his problems.

"Butane gas systems are easy to sell. You can take them out, set them up anywhere—even in the corn field—and you're ready to show what they will do.

"We have done exceedingly well with this equipment in our region, and we know that we haven't begun to get down to real work on it. It's hard work, but brings in returns."



Modern bulk plant of A. & B. Schuster Co., Holbrook, Ariz.

CLOW GASTEAM RADIATORS

combine the **SUPERIORITY** of radiator heating

the **FLEXIBILITY** of individual heaters

the **CONVENIENCE** of butane gas



LAKEVIEW COTTAGES—NICHOLASVILLE, KY.

★ ★ ★

Owner Miss Betty Hulett says:

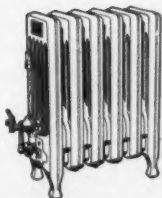
"Clow Gasteam radiators were installed in my court more than a year ago. They have been so satisfactory with the tourists that many of them have written me to get the address of the manufacturers. In my opinion, Clow Gasteam radiators are the ideal heating system for tourist courts."

Automatic Temperature Control

A safety pilot valve shuts off all gas flow to a Clow Gasteam Radiator if the pilot flame is extinguished.

INDEPENDENT

Each radiator makes its own steam heat with gas.



No basement, boiler or steam piping used

JAMES B. CLOW & SONS

201-299 N. Talman Ave.

Chicago, Illinois

MARCH 1941

Buildings

10 Cottages

One room and bath in each.

Heating System

10 Vented Clow Gasteam Radiators 610 sq. ft. steam

Butane Consumption

4500 gallons for one year
Jan. 1, 1940 to Jan. 1, 1941
including cooking gas used in owner's home

BUTANE *Power*

Lorensen Butane Service Makes Conversions in Los Banos, Calif.

The Lorensen Butane Service, located in Los Banos, Calif., offers 24-hour service to trucks and domestic users of butane.

Fred Lorensen operates the station and makes butane truck conversions. Mr. Lorensen states that a metered delivery truck is available for butane delivery. The station is a Ransome distributor.



Cope Brothers Will Serve Cars And Trucks in Lamesa, Texas

Cars and trucks equipped to use butane gas can now secure fuel and service from Cope Brothers Supply Co. in Lamesa, Texas, according to recent information received from Glen Cope.

Appliances for domestic installations are also carried.



Butane Distributors, New Firm, Foresees Automotive Demands

Butane Distributors, of Dallas, Texas, recently formed by John H. Grinnell and H. A. Tull, is dispensing butane for motor fuel under permit of the state of Texas and is also supplying butane at wholesale to distributors operating in the Dallas trading area.

The 6000-gallon butane storage tank erected on the property of the company at 599 West Commerce was constructed by Dallas Tank & Welding Co. Inc. A Brodie meter is in-

stalled at the plant, as is also a Granco pump. There has been a large demand, according to Mr. Grinnell, for butane as an automotive fuel. The company hopes to enlarge its facilities in the summer, he said, by the construction of a separate office building on the front of the property.



J. W. Parkhouse Now Manages LP-Gas Plant in Grass Valley

J. W. Parkhouse, known to the LP-Gas trade in California as "Parky," is now manager of the Glenbrook Gas Co., located in Grass Valley, Calif. Mr. Parkhouse took over on the first of the year and reports a steady business in both truck and domestic installations. The station is open 24 hours a day and has a pump for truck service.

Mr. Parkhouse is a representative for the Century Carburetor Co. of Los Angeles, serving eleven counties north of Stockton, Calif. He has been connected with butane automotive conversion work for several years.



Bob Hooe Changes Jobs But Stays in Same Town

Bob Hooe, formerly with J. S. West and Co., Sonora, Calif., is now with the Hales and Symons Co. located in the same town. Mr. Hooe is manager of the butane department for the company.



AUTOMOTIVE DIRECTORY

- Do you own or operate a butane filling station for automotive equipment? If so, list it in the National Directory published by this magazine. There is no charge. Send full information, including highway number, address, and name of manager to BUTANE-PROPANE News, 1709 West 8th St., Los Angeles, Calif.—Editor.

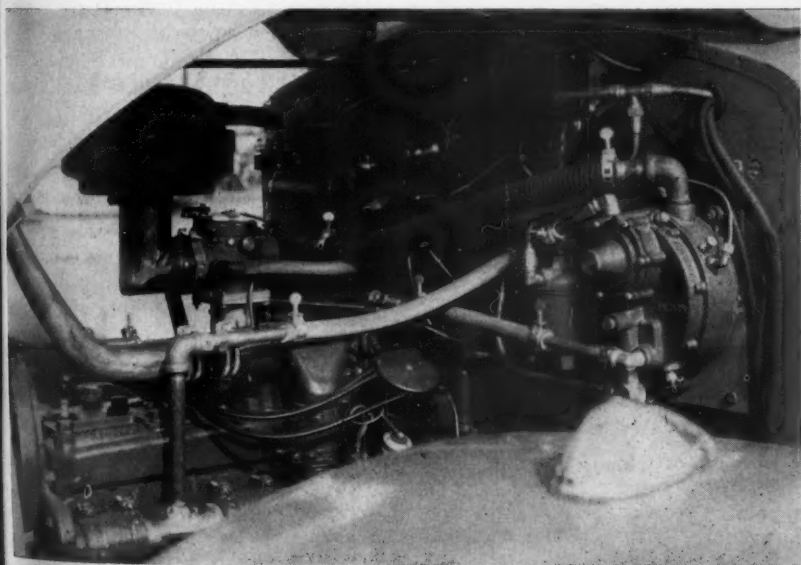
Trucker Adds Butane Units

SUBSTANTIAL proof that LP-gas converted engines are both a mechanical and economic success is supplied this month in the announcement that Griffith Co., one of California's largest contracting firms, has added 10 new butane-converted White dump trucks to their original fleet of 35 units. The announcement was released by Gilbert Woodill, sales manager, Parkhill-Wade merchandising department, who stated that Ensign carburetors were supplied with the conversions

being made by Bill Covell of the Griffith Co.

In 1935, Griffith Co. tackled one of the biggest and toughest earth moving jobs on record in the construction of the Cajalco (Calif.) dam and reservoir. (See *Butane-Propane News*, March, 1940, pp. 32-37.) To do this job the company purchased a fleet of new trucks which were immediately converted for use of butane as fuel. Among the results of this decision were the following: (1) With butane as fuel, it was found entirely feasible and practical to load each truck with $13\frac{1}{2}$ instead of the rated 10 cubic yards; (2) 4,313,000 cubic yards of earth were removed in one year with a fuel consumption

A view of a converted butane motor on one of the White dump trucks recently purchased by the Griffith Co., one of California's largest contracting firms, which now has a total of 45 butane units.



MARCH 1941

of 500,000 gallons, resulting in a fuel cost saving of 6 cents per gallon; (3) each truck was equipped with a Stewart Warner motor mile tachometer which shows that, to date, each of these trucks has travelled a minimum of 250,000



The butane installation on one of the new trucks.

engine miles with the very minimum of engine maintenance.

In June of 1940, Parkhill-Wade held an LP-gas demonstration in which one of the features was the exhibition of one of these trucks. The head was pulled for the first time and, after five years of service, all engine parts were found to be in excellent condition. All told, the Griffith Co. now has a total of 45 butane fueled trucks in operation, making their's one of the largest fleets in the country.



Gas Dealer for St. Peter, Minn.

Hinnenthal & Smith, hardware merchants of St. Peter, Minn., have been appointed local dealers for the Home Gas Co., of Minneapolis. Appliances will also be handled.

Under the Engine's Hood

THE quantity of material that enters and leaves the engine under the hood of your truck in a normal day's work can be broken down as follows:

Assuming a consumption of 50 gallons of fuel a day, which is normal for many trucks, tractors and stationary engines, it is necessary to add approximately 46,600 cu. ft. of air to completely burn the fuel.

Roughly speaking, this is the amount of air that is contained in a three story building 20 ft. x 80 ft.

Air Cleaner Needed

Along with this air goes the moisture, dirt and dust that it contains, so when hard deposits baked in the inlet passages of the engine occur after many months of work, there is indicated what an efficient air cleaner could have done to minimize this.

Deposits around the in-take valve entrances cut down on the available area and tend to lower the engine efficiency.

The fuel as it is burnt combines chemically with the oxygen in the air to form the products of combustion. These will be 6320 cu. ft. of carbon dioxide, 7900 cu. ft. of water vapor and 39,000 cu. ft. of nitrogen.

The nitrogen went in with the air and came out in the exhaust, serving no useful purpose. The fuel combined with the oxygen in the air to burn into carbon dioxide and water vapor, and in so burning ex-

WELCOME TO CHICAGO

L. P. G. A. selects for its 1941 National Convention the City of Chicago, the greatest cross-roads of the world; the hub of American business.

Twenty-five years ago, ENSIGN selected Chicago for its Eastern Factory Branch, a most central point for the distribution East of the Rockies. Over 90% of all NATURAL GAS engines sold for domestic and export use are equipped with ENSIGN carburetion. For BUTANE, the same carburetion equipment is used plus ENSIGN Vaporizers, Regulating Units and Filters.

BUTANE carburetion equipment fits into the ENSIGN manufacturing and service organization as naturally as a hand fits into a glove.

With BUTANE as a motor fuel moving Eastward, ENSIGN in Chicago is well in advance. We are fully prepared to offer the best in carburetion and engineering services.

Our Chicago office and its complete stock is located at 2644 South Michigan Avenue, Telephone Calumet 5229. Your inspection of our office is invited.

ENSIGN

CARBURETOR CO., LTD.

HUNTINGTON PARK, CALIF. • DALLAS, TEXAS • CHICAGO, ILL.

panded to furnish the driving power in the pistons.

Converting the water vapor back into gallons shows that when 50 gallons of fuel are burned, over 42 gallons of water are formed. This comes out of the exhaust pipe in vapor form unless the exhaust pipe is long enough to cool the vapors. Vertical exhaust stacks often allow the water to condense and form a trap in the exhaust line causing a back pressure on the exhaust system. The water vapors also cause corrosion in the muffler and exhaust piping, often causing a gradual build-up of rust that clogs the exhaust and causes back pressure.

Periodic inspection of the exhaust system on equipment that is used a great deal is recommended to increase the engine efficiency.

American Gas Service Co. Will Open Grove City, Ohio, Plant

Moving from 860 North Cassidy street, Columbus, to a location on the Harrisburg pike immediately south of Grove City, Ohio, the American Gas Service Co. will hold the formal opening of the local branch office and warehouse the last part of February, according to W. W. Lang, district manager.

The plant has facilities for storing 18,000 gallons of butane.

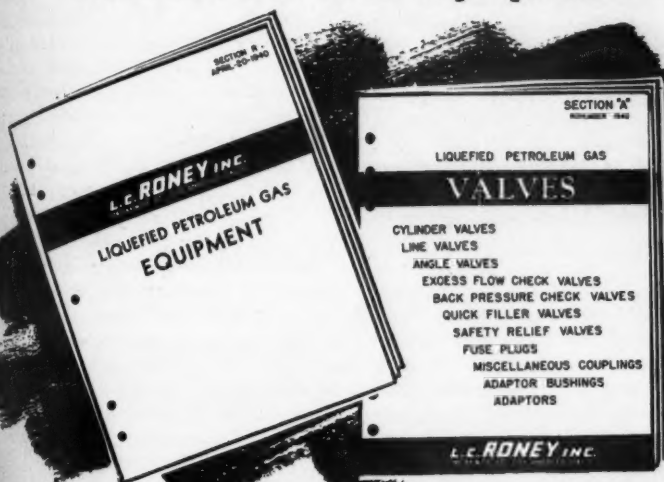
Personnel of the plant includes Burton Funk, construction superintendent; Donald Edwards, Homer Hersey, Darrell Mitchell, and William Petty, construction crew members; William Brokaw, H. C. Seabolt, and E. J. Borden, Jr., salesman, and Phyllis Wood, secretary.

Distribution extends for several miles on all sides of Grove City.



Scene at the Dec. 16 banquet of the National Butane Gas Co., in conjunction with the two-day dealer convention attended by LP-Gas men from several nearby states. The meeting featured speeches by men prominently identified with the industry and inspection of the plant.

SEND FOR THESE TWO ILLUSTRATED BOOKLETS on the latest Liquified Petroleum Gas Equipment



Developed for the L. P. G. Industry by the veteran L. C. Roney organization these two booklets give detailed information, specifications and illustrations of practical equipment and installations.

Included are descriptions of the Roney Gasair Vaporizer and Roney Vapor Differential Compressor.

*Whatever the Need
Whatever the Problem*

"WRITE RONEY"

Largest and most Experienced Manufacturing
Engineers and Jobbers of L. P. G. Equipment.

L.C. RONEY INC.
1740-44 W. 59th ST. • LOS ANGELES, CALIF.

MARCH-1941

Industrial Commission Adopts Safety Code for State

The Industrial Commission of Arizona, meeting in Phoenix on Jan. 10, adopted as a state safety code the Standards of the National Board of Fire Underwriters, as published in Pamphlet No. 58, with the exception of two rules, Order B.5 and Order B.11. Changes in these rules have been outlined and submitted to Arizona members of the LP-Gas industry for their endorsement or criticism. Final adoption of these changes will be considered at a later date, according to Chief Safety Engineer H. E. Hodgson.

At the open hearing there were 28 Arizona dealers. Also in attendance were A. N. Kerr, D. D. Purring-ton, Turner Smith and Chet Ashley, all from California, who have been active in aiding the California Industrial Accident Commission in forming a similar code for California and who offered the benefit of their experiences to the Arizona Commission. It is desired that the codes of both

of these states be closely coordinated.

Members of the Industrial Commission of Arizona are L. C. Holmes, chairman, Lynn Lockhart and E. T. Houston.



The Wilcolator Co. Is Building New Plant

Due to expanding business, The Wilcolator Co., manufacturers of oven temperature controls for gas and electric cooking ranges, will move into a thoroughly modern two-story plant at 1001 Newark Ave., Elizabeth, N. J., early this spring, it has just been announced by H. A. Wilson, president of the firm. The present plant at 17 Nevada St., Newark, N. J.

Manufacturing methods will be benefitted considerably as a result of the increased facilities. All branches of the business will now be consolidated in the one building. An enlarged laboratory will be installed at the new plant for thermostat controls research. A photograph of the new plant appears on this page.



This modern, two-story plant is to be the new home of The Wilcolator Co.

CRANE SUPERIOR WITH MINI-MISER

... the biggest sales "natural"
in the water heater field!



MINI-MISER (patent applied for) is a revolutionary development in water heater construction. It minimizes heat loss; it is a miser on fuel cost.

There is nothing mechanical about it. It consists of a new method of air intake which regulates air flow by *natural* means and drastically cuts stand-by loss. It opens vast new possibilities in the sale of automatic hot water service to all users of liquefied petroleum gas.

WRITE FOR DETAILS. CRANE CO. offers you an outstanding line of especially constructed L.P.G. water heaters—in a complete range of types and styles—with deluxe models for the finest installations or popular priced models for low cost housing—automatic or manually operated—in sizes ranging from 6 gallons capacity to giant heaters suitable for big buildings!

All are built with the Baso Electro-Magnetic 100% automatic shut-off. All are approved by the American Gas Association Testing Laboratories. *And all are backed by the Crane name and its 86-year reputation for quality!*

For complete details and specifications write

**Premier Heater Division
BASTIAN-MORLEY CO., INC.
LaPorte, Indiana**



ASK US IF GAS PAYS ITS



... say dealers who push



1. "Gas Refrigeration has opened the door to better business for us in several ways. For not only has it brought us additional merchandising profits, but it has protected our present gas load, stimulated the sale of other gas appliances—thus building new load—and it has helped us publicize the modernity of gas. Servel is the ideal appliance for accomplishing this . . .



2. "Our experience has convinced us that there are several very good reasons why. Once people are cooking with our gas, the idea of being able to add modern automatic refrigeration in their homes is highly appealing to them. Not only that, but Servel Electrolux has the edge decidedly over other makes in sales appeal.

REFRIGERATION OWN WAY!

SERVEL ELECTROLUX

3. "Its basically different operating principle—a freezing system with *no moving parts*—makes it possible for us to offer prospects advantages they can get *only* in Servel: permanent silence, continued low operating cost, freedom from wear. As a result of the way pushing Gas Refrigeration has helped our business, we are convinced any L.P.G. dealer is bound to come out ahead if he'll put a real selling effort behind Servel Electrolux."



HERE'S HOW GAS REFRIGERATION HELPS BUILD L.P.G. BUSINESS:

- Protects Your Present Load
- Builds New Load
- Stimulates the Sale of Other Gas Appliances
- Publicizes the Modernity of Gas



MARCH 1941

Propane-Air Standby Plant for Alabama Industrial Project

One of the biggest industrial standby plants in the United States is being engineered and designed by the Shell Oil Company in connection with the new shell-forging and finishing plant of the Landsdowne Iron and Steel Co., now nearing completion at Gadsden, Alabama. This is also believed to be the first forging plant of any size planning to operate on straight propane-air in the winter.

Normally the fuel requirements of the plant, including the air conditioning and heating of plant and offices, will be taken care of by natural gas, but it is anticipated that the natural gas supply will have to be augmented, during the winter peak of industrial and residential demands, by as many as 20 to 50 cars of propane during the cold season. Six 30,000-gallon tanks will supply a propane storage of 180,000 gallons, and the system is

designed to supply 50,000 cubic feet of 1408 B.t.u. propane-air gas hourly.

The forging plant is expected to be in operation on defense contracts by April 15. The propane installation will be completed in ample time to handle next winter's operations.

Bottled Gas Ranges Top Sales For Buffalo Hardware Co.

Bottled gas range sales led all other items for the Buffalo Hardware store, Buffalo, Minn., in 1940, and helped to raise the firm's total business volume to practically its 1929 level, according to R. A. Becker and Fred Currier, proprietors.

This company has been in business for 28 years and home appliances have been featured for a number of years. Farmers and summer dwellers are becoming larger users of LP-Gas every year, and the sale of ranges, plus repeat gas sales, are increasingly important sources of profit.

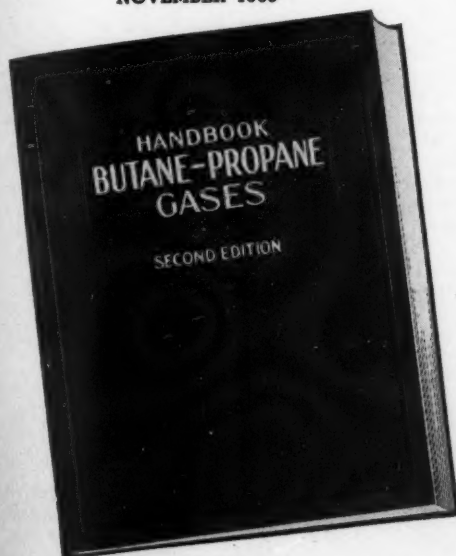


Scene at the Skelgas sales convention held at the Knickerbocker Hotel in Chicago, January 2-5. At the speaker's table, left to right, are: George Bach, general sales manager of Skelgas Division; Captain Herne (standing), news commentator; Frank Ferrin and Jack Shaw, both of Henri, Hurst & McDonald; and J. H. DeLoria, Skelgas sales executive.

Handbook BUTANE-PROPANE GASES

LATEST REVISION
NOVEMBER 1938

SECOND EDITION



415
Pages

\$5⁰⁰
Plus
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CONTENTS: Semi-Bulk Distribution: Use of Butane in Buses: Combination Propane Operated Utility Plant: Use in Internal Combustion Engines: Design & Installation of Storage: Supply from Petroleum Refineries: Engineering Data on the Lower Olefins: Domestic Appliance Testing and Utilization: Economical Comparisons with Coal, Oil, Electricity, Producer Gas, Manufactured Gas: Town Plants: Manufacture from Natural Gas: Special Uses: Volume Correction Factors: Transportation: Use with Other

Gases: Analysis & Testing: Properties of Mixtures: Bottled Gas Distribution: Bibliography: Central Plant Directory: Catalog Section.

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If you live in Canada add 50 cents excise tax
If you live in California add 15 cents sales tax

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MARCH-1941

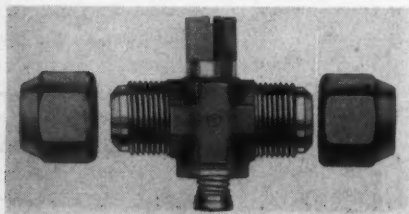
101

PRODUCTS

Shutoff Valve

The W. J. Schoenberger Co., Cleveland, Ohio.

Description: The valve illustrated herewith is a new product and is specially adapted for use as a low pressure shutoff valve in the line connecting the gas tank to the appliance. Other special valves and fittings are manufactured by this company for use with liquefied petroleum gas. A special folder, devoted to fittings for the bottled gas industry and covering a complete line of burner valves, offset fittings and other accessories, may be had upon request.



Vent and Flue Pipe

Williams-Wallace Co., 160 Hooper St., San Francisco, Calif.

Model: Type "R"—(round). Type "O"—(oval).

Description: Metalbestos consists of a pipe made of aluminum, assembled within a galvanized steel casing which is one inch larger in diameter than the aluminum pipe. The two members are held in position by vitrified asbestos spacer rings, so shaped as to allow the free circulation of air through them and within the one-half inch air space provided completely around the alu-

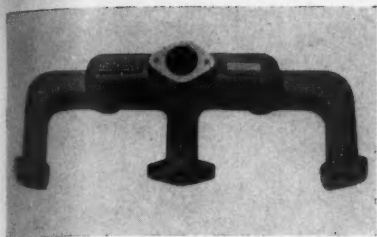
minum pipe. Outer casing is always cool due to air space. Efficiency is insured because burnt gases are kept hot by inside aluminum pipe, plus insulating air space surrounding it, and do not condense within vent or flue. Metalbestos is made to meet the severe requirements demanded of a pipe for venting gas appliances. Pipe is made in both round and oval shapes. Both shapes furnished in 3- and 10-ft. lengths. A full line of fittings is available.



Butane Manifolds

Electric and Carburetor Engineering Co., 2323 E. 8th St., Los Angeles, Calif.

Description: The new large area (extremely cold type) intake manifolds for International and G.M.C. trucks remove all hot spots and restrictions found in present standard gasoline type manifolds. Made of cast aluminum, properly finned for rapid dissipation of heat. Adds over 60% to internal area and produces an even length draft to each cylinder. Volumetric efficiency is greatly increased, producing 20% more horsepower and at least 10% better mileage. For International trucks: Manifold will fit all engines from F.B.B. 298 cu. in. to and including F.B.B. 450 cu. in. Cubic inch displacement will be found in engine



number prefix. For G.M.C. trucks: Manifold will fit the following engines—361 cu. in., 426 cu. in., 450 cu. in., 451 cu. in.



Water Heater

Security Manufacturing Co., Kansas City, Mo.

Model: De Luxe.

Description: The Security De Luxe water heater is built in 20-, 30-, and 40-gal. capacities. The heavily galvanized copper-bearing steel

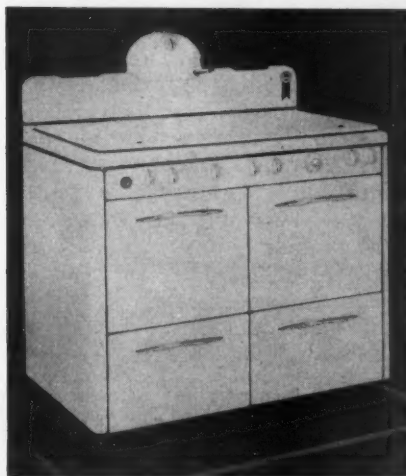
tank is insulated both top and bottom with "Fiberglas", enclosed in a steel jacket, and finished in lustrous white baked enamel. Down-draft diverters prevent excessive drafts from affecting proper combustion. Burner is easily removed by backing out two bolts. Fully described in 1941 catalog, available upon request.

"Safe-Tee-Kee" Valve

The Cleveland Co-Operative Stove Co., 2323 E. 67th St., Cleveland, Ohio.

Model: SAFE-TEE-KEE.

Description: This "Safe-Tee-Kee" is a master shutoff valve controlled by a removable key. When the valve is turned off and the key removed, all burners on the cooking top, oven and broiler are rendered ineffective. The valves may be turned but no gas can pass through the range. When the key is restored and the valve turned on, the range is instantly ready for use. A specially designed by-pass of the pilot lights in no way interferes with the range's automatic lighting. It is not necessary to keep the key in the valve to operate the range.



User Testimonial Letters Turned to Dealer Profit

By PAUL FANNIN

Fannin's Gas & Equipment Co., Phoenix, Arizona

Capitalizing upon the enthusiasm of users of liquefied petroleum gas, and gas appliances, has been common practice among dealers throughout the country, but some firms have pursued the idea much farther than others.

Sometimes, rewards have been offered satisfied customers for turning in names of their friends who are good prospects for an installation. Occasionally, new owners are induced to permit neighborhood demonstrations in their newly-equipped kitchens. Frequently, dealers use recent purchasers as preferred references for those not yet sold.

Fannin's has gained excellent sales results during the last year from the use of testimonial letters written by well pleased users, these letters providing the theme copy for extensive newspaper advertising and actually constituting the basis of a long and highly successful campaign. The first ads appeared one year ago, and this winter the same plan is being intensively reworked. It is one that can be profitably employed by any other dealer. This is the method followed:

Every salesman in the organization is invited to secure from families he has already sold, letters of endorsement concerning installations made for such families. The

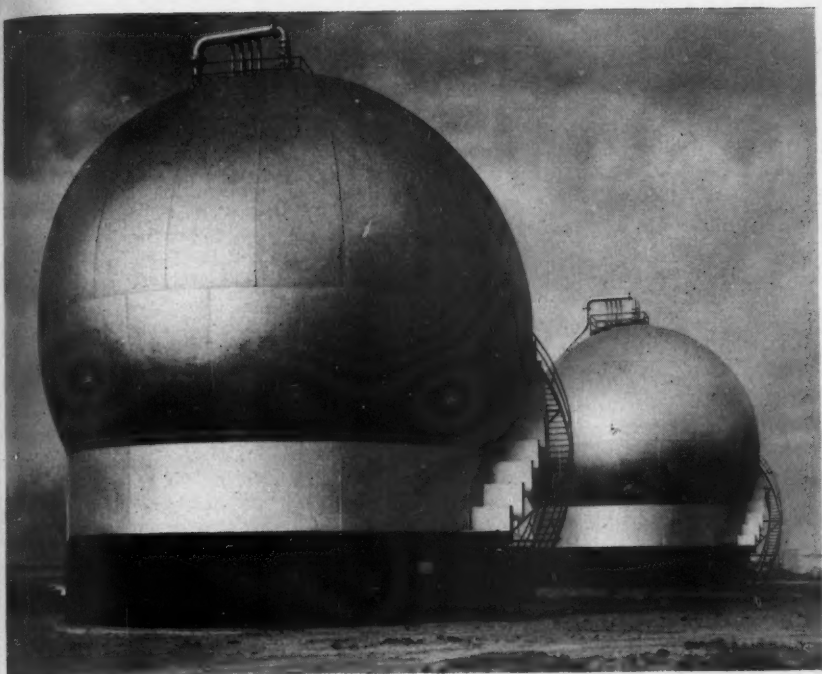
salesman securing the largest number of such testimonial letters in a given period of time is given the first prize of \$20; the second prize is for \$15 and goes to the one who secures the best letter of approval; and \$10 is awarded the salesman securing the second largest number of testimonial letters.

Users profit directly from the contest plan, also. The writer of the letter judged best of all received is given a \$25 merchandise order, and second and third prize winners get, respectively, \$15 and \$10 merchandise orders.

Letters Must Be Originally Written

The letters are required to be originally written by satisfied users and must include facts covering length of time they have used "Bu-Gas", for which Fannin's are Arizona distributors; the size of plant used; number of members in the family; number of rooms in the house in case of heating loads; the average monthly costs, divided into summer and winter months, and finally, an opinion of the fuel, itself, and the value of its service to the family.

After the letters have been competently judged and prizes awarded, the letters are made a part of advertisements which appear in local



Modern BUTANE Storage

Presented above are two Wyatt-built spheres . . . 10,000 barrel capacity, 95 pounds working pressure . . . being used for Butane storage in a polymerization plant in the Texas Panhandle. They're the last word in modern, safe, economical pressure storage.

Skid tanks. Truck tanks. Bulk storage and underground systems for commercial and domestic use.

Wyatt's

WYATT METAL & BOILER WORKS

HOUSTON AND DALLAS TEXAS

BUTANE-PROPANE
News

BINDERS

A Click and Magazines are Bound



TO OUR many thousands of subscribers who have wished for an inexpensive way of binding and preserving their copies of BUTANE-PROPANE *News* we offer the new and beautiful PERMO BINDER to fill this very definite need. *No punching or marring of magazines necessary.* A click and the magazine is in . . . and with a patented construction any issue can be quickly and easily removed without disturbing the other magazines in the binder. One binder holds 12 issues.

In addition to their practical use, PERMO BINDERS are so handsome in appearance that they turn your magazines into deluxe library editions of beautifully bound books. In your bookcase or on the library table, whether in the home or office, PERMO-BOUND magazines are fitting companions for your rarest editions.

*Send check for \$1.50 for each
binder desired, \$1.75 foreign.*

BUTANE-PROPANE
News

1709 West Eighth Street

Los Angeles, California



Paul and Ernest Fannin laying out advertising campaign built upon testimonial letters that they received from satisfied users of LP-Gas.

newspapers. Several typical ones follow:

"I have been a Bu-Gas user for nearly a year and a half . . . and the average monthly cost for the first year was \$1.75. That included cooking and baking, the heating of all bath water, laundry water and the water used for scalding chickens in connection with our poultry business."

"Bu-Gas has changed my desert home from a place of dudgery into a modern, up-to-date, convenient and pleasant place to work and live. I enjoy every household convenience my city friends do. We have perfect refrigeration, and it costs so little. This winter every room in our five room house has been comfortably and economically heated from one Bu-Gas heater, saving the cost of three stoves and that much

additional fuel."

"After a year's trial I feel quite free to express the pleasure it affords me to know that my fuel troubles have all been eliminated. My experience with Bu-Gas has been one round of success. Not once have complications of any kind occurred . . . I place my fuel savings at a very conservative figure ranging between 45% and 50% under the cost of any other fuel I have used. The flame seems magic—instantaneous, constant and of intense heat without the preliminaries of generating or preheating. I find it positively odorless, free of carbon or other impurities."

As the users of our fuel have applied it to all domestic requirements, including cooking, water heating, refrigeration and space heating, it has been possible to re-

print letters covering all applications.

The campaign benefits have been substantial and manifold. Much new business has directly resulted. Our ads have made us better known throughout the State. Our prospect list has been doubled. We are on more intimate terms with all who use our products. A basis of friendly understanding and good will has been established between the individual salesmen and their customers, which will lead to more sales in the respective neighborhoods. And our men have been keyed up to a new sales enthusiasm which is continually apparent in their work.

We have found no better method of sales promotion than our methods of using the testimonial letter.

L.P.G.A. Annual Convention Meets in Chicago Feb. 24-25

The annual national convention of the Liquefied Petroleum Gas Association, Inc., will be held this year in the Palmer House, Chicago, on Feb. 24-25.

All activities of the Association will be centered on the fourth floor of this hotel. Exhibits will be on display in the exhibition hall and business meetings, technical sessions, lunches and entertainment will be centered in the Grand Ball Room on the same floor.

On Monday evening a gay and colorful party will be held in the ballroom.

This national convention will draw a large attendance from coast to coast. The business sessions, technical discussions and election of officers will be of prime importance.

The convention will be open to all members and non-members engaged in the marketing and production of liquefied petroleum gas.

This Magazine Now Member Associated Business Papers, Inc.

BUTANE-PROPANE *News*, in publication less than two years, has been accepted to membership in Associated Business Papers, Inc., an organization comprised of the leading business and industrial papers throughout the United States.

Membership was voted at the Feb. 1 executive committee meeting in Chicago, and constitutes a distinct honor, as it is unusual for so young a magazine to be thus approved.

A Correction

An article appeared in the February issue of BUTANE-PROPANE *News* entitled, "Across Continent in 84 Hours in Butane-Equipped Car," by C. H. Jones, in which he reported his experiences in purchasing butane for his car on a trip from Fresno, Calif., to New York and return. Prices he paid for fuel were frequently quoted.

Numerous letters have been received inquiring if the prices named included highway taxes. All taxes were paid where legally required.

New Mexico Revises Laws Governing LP-Gas

The State of New Mexico has revised the rules and regulations governing the storage, transportation and use of liquefied petroleum gas which were first enacted on Dec. 15, 1939. The new statute was passed on Dec. 13, 1940, and became effective on Feb. 17, 1941.

Rest Home Installs Butane

A butane gas system has been installed in the "Old Homestead," a rest home at Mentone, Calif. The gas will be used for heating as well as cooking in the institution.

CALENDAR

February

L. P. G. A. Annual Meeting—Palmer House, Chicago, February 24-25.

April

Natural Gasoline Association of America Annual Convention—Baker Hotel, Dallas, Texas, April 23-25.

L. P. G. A. Southern Section—Roosevelt Hotel, New Orleans, April 28-29.

May

American Gas Association, Natural Gas Section—Dallas, Texas, May 5-8.

Western Metal Exposition and Congress—Pan-Pacific Auditorium, Los Angeles, May 19-23.

June

Association of Gas Appliance and Equipment Manufacturers—Ambassador Hotel, Los Angeles, June 3-5.

California Natural Gasoline Association June Frolic—Ambassador Hotel, Los Angeles, June 7.

L. P. G. A. Pacific Coast Section—San Francisco, June 9-10 (tentative).

Pacific Heating and Air Conditioning Exposition—San Francisco, June 16-20.

October

American Gas Association 23rd Annual Convention—Atlantic City, the week of October 20.

California Natural Gasoline Association, 16th Annual Fall Meeting—Ambassador Hotel, Los Angeles, October 31.

Roy H. Warmee Appointed Sales Promotion Manager

Roy H. Warmee has been appointed sales promotion manager of Minneapolis-Honeywell Regulator Co., with headquarters in Minneapolis, according to an announcement by C. B. Sweatt, vice-president in charge of sales.

Mr. Warmee was formerly widely known in sales circles. He has appeared before many state and national sales conventions. In 1937 he won the national Howard G. Ford award for outstanding achievement in sales management and at the present time he is National Chairman of the 1940 award.

Mr. Warmee will assume his duties immediately.

Springer Gas Co. Organized

The Springer Gas Company is the name of a new firm which began business about Feb. 1 to supply butane gas in the area composed of Harding, western Union, southern Colfax and northern Mora counties, New Mexico.

The new business is a partnership composed of Clint A. Johnson, and Earl E. Hemphill, who heretofore has been in the employ of the Tomlinson Super Butane Gas Co.

In line of business they will install tanks at homes or on business premises and refill individually owned gas bottles. They have purchased a 2-ton International truck which is being equipped with a 1500-gallon high pressure tank.

Anadarko, Okla., Passes LP-Gas Ordinance

The city council of Anadarko, Okla., has passed an ordinance governing the use of liquefied petroleum gas. It prohibits storage of the fuel in the central business area and denies the parking of loaded trucks in other sections except for unloading periods.

In order that no discrimination be shown, the ordinance places similar restrictions upon the use of gasoline and kerosene.

The new regulations were passed at the suggestion of Fire Chief John Bay.

Nowata, Okla., Has LP-Gas Dealer

Rogers & Co., furniture and appliance dealers in Nowata, Okla., has taken a butane gas agency for that district and will sell the fuel and LP-Gas appliances, according to Pete Jones, manager of the company.

Jake Jolly will have charge of installations and service.

RESEARCH

- **BUTANE-PROPANE** *News* wishes to keep its readers informed regarding technical and practical advances concerning research, manufacture, development, and transportation in the liquefied petroleum gas field. In this column will be found a resume of recently published articles, papers, bulletins and books dealing with the industry's various phases.—Editor.

Fuel Oil Burning—Zuce Kogan. *Combustion*, Nov., 1940, pp. 47, 48. After reviewing briefly the major concepts on which the widely accepted theory of fuel oil burning is based, the author offers a new approach to the problem which differs from the traditional concepts. He shows how modern practice tends to support this theory.

World's First Commercial Neo-Hexane Produced in Phillips Plant. *World Petroleum*, Ann. Ref. issue, 1940, pp. 48-51. Gains up to 25% in basic power output anticipated for aircraft powered by this newly developed fuel giving U. S. military planes performance characteristics at present unattainable in any other country. While the process for the manufacture of neo-hexane falls in the general category of polymerization processes, it converts gaseous hydrocarbons to liquid hydrocarbons; more specifically, however, it is known as an alkylation process and is based on a chemical reaction involving the direct union of the proverbially inert paraffins with other hydrocarbons. Until a few years ago chemists thought this

reaction could not take place. The neo-hexane conversion of gaseous hydrocarbons to liquid hydrocarbons is effective without catalyst but is essentially a controlled chemical synthesis. The conversion is carried out in one or two stages depending on whether ethylene is available as such or must be obtained by controlled cracking. The two stages are briefly as follows: 1. Ethane and propane are cracked to produce ethylene. 2. Ethylene plus isobutane are reacted to produce neo-hexane. Flow sheet is shown.

The Clement-Pigneguy Knock Indicator—D. M. Clement and P. G. Pigneguy. *Journal of the Institute of Petroleum Technology*, Nov., 1940, pp. 489-513. A long-felt need in engine-fuel testing has been an indicator of knock intensity which is unaffected by combustion pressure and one also in which the accurate functioning does not rely on the interdependent setting of its component parts. The indicator described in this paper is shown to possess the desired qualities, which enables testing to be carried out over the entire octane scale without alteration of the original setting. While the construction may appear to be on similar lines to the A.S.T.M. C.F.R. bouncing-pin indicator the change in principle involved is fundamental. The new indicator has so far only been used in the standard C.F.R. engine and also a high-speed C.F.R. engine, but it is felt that the principle can be successfully adapted for full-scale car and aero-engine testing.

Cutting Steel with Oxy-Propane—W. T. Tiffin, *Iron Age*, Dec. 12, 1940, pp. 61-64. The author discussed the problem of oxy-propane cutting of steel, both as regards technical aspects and costs.

Welded Joints Analyzed by Polarized Light—E. W. P. Smith. *Iron Age*, Nov. 14, 1940, pp. 56, 57. Polarized light cannot be passed through metal, of course, but when passed through celluloid models simulating the conditions of welded joints, points of stress concentration due to faulty design or welding procedure are revealed.

Equilibrium Constants for Hydrocarbons in Absorption Oil—C. E. Webber. *Petroleum Technology*, Nov., 1940. 11 pp. Vaporization equilibrium constants of methane through hexane in a typical absorption oil have been determined at temperatures from 33° to 180°F. and pressures from 100 to 5000 lb. per sq. in. These K values are considered to be suitable for any multicomponent hydrocarbon system up to 1500 lb. pressure. Above 3000 lb. per sq. in., the composition of the mixtures has a pronounced effect and care should be exercised in applying these values to systems that differ considerably from the one investigated. Absorber operations seem feasible, even above 2000 lb. per sq. in., the optimum point with regard to oil circulation being at the pressure where the K values are at a minimum for the given temperature.

The Elimination of Exhaust Gases from Truck Bodies—T. P. Jenkins. *Gas*, Oct., 1940, pp. 46-48. Employees riding in trucks of all metal body type considered in this study are subjected to noxious fumes and so complain of headaches and dizziness. As a result operators have endeavored to find the proper location of an exhaust pipe so that the fumes therefrom will not enter the space occupied by passengers. This paper covers a study made of this problem, using a model truck designed like its larger prototype. The tests were made using a type of

wind tunnel, the central one-third of which had glass sides. A smoke box with a damper was located at one end and a three-speed exhaust fan at the other. Straightening vanes were installed at the front of the model in order to overcome the tendency for the warm smoke. Conclusions resulting from study are given.

Protection Against Static Electricity—J. M. Pearson. *Oil and Gas Journal*, Nov. 14, 1940, pp. 140, etc. Author explains how static electricity is generated, and takes several examples from the petroleum industry, following the life history of these electric charges, and deducing the best means of handling them. An A.P.I. paper.

Lower Truck Operating Costs Seen As Result of Flow Tests. *National Petroleum News*, Dec. 18, 1940, pp. 27, 28. Briefly describes tests made at the University of Wisconsin, where piping, valves, fittings, meters and the like are tested to see what was the proper arrangement of this equipment on a truck tank and why petroleum products could be discharged at a faster rate from one truck than another. For the oil marketer, this promises to save money and time on truck operation.

Cost of Steam with Gas as Fuel—I. E. Brooke. *Heating, Piping and Air Conditioning*, Nov., 1940, pp. 669, 670. Charts prepared by author give complete data for easily computing the cost of fuel.

Modern Fuels and Lubricants for Diesels—P. M. Heldt. *Automotive Industries*, Dec. 1, 1940, pp. 582, etc. A brief resume of the various papers presented at the S.A.E. National Fuels and Lubricants Meeting, held in Tulsa, Okla., Nov. 7 and 8.

West Coast Production

Near 90,000,000 Gallons

PRODUCTION of liquefied petroleum gas on the West Coast (which really means California as there is little production in the other Pacific states) in 1940 totaled 89,723,000 gallons, according to the survey of the United States Bureau of Mines, issued by the Economics Division in the Pacific Coast territory under the direction of Edward T. Knudsen, supervising economic analyst of the Los Angeles office, and released Feb. 1.

This was an increase of 26,711,-

000 gallons over the 1939 production, which amounted to 63,012,000 gallons.

The monthly production averaged 7,477,000 gallons, with February showing a low of 6,002,000 gallons and December outdoing all other months with 8,383,000 gallons. Producing companies numbered from 13 to 16.

Production figures in the past have represented approximately 25% more than sales, the difference being the amount used by the refineries, themselves. The exact

PROPANE TANKS

The proper design and fabrication of Tanks for Propane Storage is dependent upon the knowledge and experience of the fabricators. MUCH DEPENDS UPON THEIR SPECIFICATIONS FOR MATERIALS AND THEIR CHOICE OF PROCEDURE FOR HANDLING THEM. Because Downingtown has had considerable experience in building tanks for this service, we do know the answers to those basic problems. Let us help you with yours.



**S
E
L
W
Y
N**

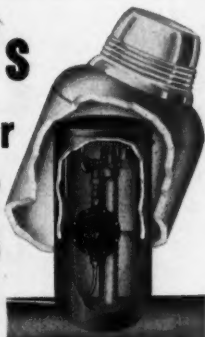
Fittings for L-P Gas

• To Be Sure
specify Selwyn fittings for Butane-Propane installations. Many satisfied users are demanding Selwyn fittings today.

SELWYN, Inc.

Lynwood, Los Angeles, Cal.

**Here's
the answer
to Winter
Freeze-up
Problems**



PIONEER INSULATED HEAD

with proper size tank to adequately handle the maximum winter load of all connected appliances. Pioneer insulation prevents head freezing . . . reduces costly service calls . . . increases customer satisfaction. All Pioneer Plants conform to the ASME code. Write for details of the Pioneer Line.

EWING BUTANE GAS CO.

See our Exhibit—
Pat Stock Show, Ft. Worth, Tex., Mar. 7-16

CONVENTIONALLY SPEAKING

Built to stand more than ordinary Household wear and tear. Constructed to give longer and better service than you expect at the price.



AUTOMATIC and ROYAL ROSE GAS RANGES

Will build up a good healthy list of gas users. Inquire today.

J. ROSE & CO., INC.

25 W. 29TH ST.

NEW YORK

Manufacturers

Est. 1885

figures will not be available for several months yet, or at the time the National figures are released by the Bureau of Mines, but if the former averages hold good the 1940 Pacific Coast sales will total approximately 67,292,000 gallons. Neither have figures been released which show the breakdown of the total figures into the various uses. However, the 1939 percentages will no doubt be closely duplicated with the exception of butane sold for internal combustion engine use. That has gained above other demands in the West, it is believed. As the 1939 gain was 43.2%, represented by the sale of 24,048,000 gallons for engine use, it is not unreasonable to expect upwards of a 50% gain in 1940, which would then reach a figure of about 36,000,000 gallons

used for engine fuel. That would be approximately 20% more than was used in the entire nation for

TABLE I. PRODUCTION AND DISTRIBUTION OF LP-GAS ON WEST COAST — 1940

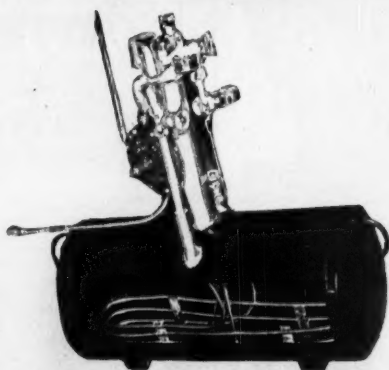
	1939 Production Gals.	1940 Production Gals.
Jan. ...	4,318,000	6,579,000
Feb. ...	3,947,000	6,002,000
March ...	4,760,000	7,780,000
April ...	4,779,000	7,413,000
May ...	4,871,000	7,661,000
June ...	5,106,000	7,230,000
July ...	5,212,000	7,983,000
Aug. ...	5,194,000	7,519,000
Sept. ...	5,270,000	7,248,000
Oct. ...	5,898,000	7,950,000
Nov. ...	6,713,000	7,975,000
Dec. ...	6,944,000	8,383,000
Total ...	63,012,000	89,723,000

FLASH-O-GAS SYSTEMS

Approved and
Listed by
Underwriters
Laboratories
for Underground

Constructed under
ASME Code

Available in both
Above and
Underground
Systems



Uniform Pressure.
No adjustments.
Continuous blue
flame. Will operate
in any climate. Elim-
inate service calls.
Higher efficiency,
lower operating
costs.

**NO CHANGE IN
DEW POINT.
"EXCLUSIVE
DEALERSHIPS"**

Manufactured by WENDLAND MFG. CO., San Angelo, Texas



STABILIZED BUTANE

We make wholesale deliveries by
Transport, Tank Car or from one
of our Bulk Plants.

Exclusive Distributors
SMITH STEEL TANK CO.
Manufacturers of A.S.M.E. code tanks

For further details write or wire

R. J. ALLISON CO.
P. O. Box 23 TULSA, OKLA.

ROBERTSHAW MANUALS

will help increase your sales



FOR DOMESTIC SALESMEN

"More Income from Gas Ranges"

How can your salesmen sell more gas ranges? This manual shows simply, graphically, convincingly. Thousands of salesmen have greeted it with enthusiasm, are putting it to effective use.

FOR COMMERCIAL SALESMEN

"Hidden Losses in Your Kitchen and How to Stop Them"

The latest developments in commercial gas cooking equipment are brought together in this manual, now used by many bottled gas dealers.



Write for free copies

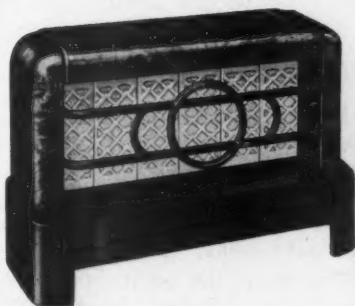
ROBERTSHAW THERMOSTAT COMPANY
YOUNGWOOD, PA.

BU-PRO-FIRE

HEATING EQUIPMENT

for

LP GAS



- A complete line of heaters and floor furnaces.
- Designed especially for liquefied petroleum gases.
- Sold exclusively to L P G dealers.
- All cabinets finished in "Life-time" Porcelain Enamel.
- Heating units for every possible requirement.
- Radiants, Vented Radiants, Vented Circulators and Bath Heaters.
- Floor furnaces from 20,000 to 75,000 B.T.U. input.
- Approved by American Gas Association for L P gases.

WRITE FOR COMPLETE
CATALOG AND PRICES

TENNESSEE ENAMEL MFG. CO.
NASHVILLE, TENNESSEE

engine fuel in 1939, which was 29,792,000 gallons, and indicates how important is becoming the automotive branch of the industry. As engine uses in the Southwest and Midwest are increasing at probably a higher rate, if not yet in higher volume, than those on the Pacific Coast, the National figures, when released, will reflect a wide spread in that division.

National Sales Climb High

Private, but authoritative, estimates have placed total 1940 National sales at 300,000,000 gallons, as compared to 223,580,000 gallons in 1939 (see *Butane-Propane News*, February issue, pp. 11-16).

The month-by-month production figures of LP-Gas on the West

Coast for 1939 and 1940, from which the above indicated 25% must be deducted to find approximate total sales, are shown in Table 1.



Northwest Division, L.P.G.A., Meets in Seattle, Wash.

The Northwest Division of the Pacific Coast Section, L. P. G. A., met in the Roosevelt hotel, Seattle, on Feb. 8, with C. A. Marsh, Vice Chairman, presiding.

A discussion of plans for the organization's activities in 1941 was the prime object of the meeting. Ed Sorger, supervisor of safety for the State of Washington, made an address on safety regulations which are being considered by the Washington legislature, now in session.

Cavalier GAS RANGES

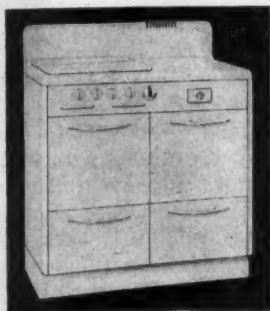


Keep Kitchens Cool

A range so heavily insulated that even long baking leaves the kitchen cool and comfortable. Saves gas. Cooks better. Heats faster. Gives you more selling points. All liquid petroleum companies using Cavalier Ranges tell us they are great good-will builders. Write today for full information.



Pan American GAS RANGES



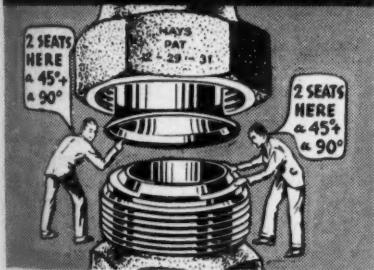
Designed and built for Butane Gas.
Approved by A.G.A. for Butane.

DORTCH STOVE WORKS
FRANKLIN • TENNESSEE

WAREHOUSES

DALLAS, TEXAS AMARILLO, TEXAS
HOUSTON, TEXAS OKLAHOMA CITY, OKLA.

NO PIPE TO THREAD SOLDERING LITHARGE



Approved by Underwriters' Laboratories

THE enlarged view above shows how the 2-faced flare of the copper pipe (45°+90°) matches the 2-faced machined seats of the fitting (45°+90°) to make a doubly tight joint that resists maximum vibration, pull and twist stresses. Only *Double Seats* have this doubly sealed feature.

HAYS MFG. CO., • ERIE, PA.

MARCH-1941

The Story of Viking



FLEXIBLE CASING . . . all Viking Butane-Propane Truck Mounting Pumps are designed with this exclusive flexible casing. Rotating in either direction, ports can be quickly turned to fit piping. This trims installation time—guarantees a neater, sturdier job.

But this is just one of the many features that has helped to make Viking the top choice of Butane-Propane producers and distributors. For a complete listing of features and illustrations of all models, write for Bulletin 2301-40.



Look for This
Trade Mark—
The Sign of a
Genuine Viking

VIKING PUMP COMPANY

CEDAR FALLS, IOWA

No Repossession Problem Here!

NEWSPAPER advertising, direct mail, and cooking schools have been influential in developing sales for The Gas Engineering Co. in Daytona Beach, Fla., which incidentally won all four quarters of the 1940 C.T.U. quota buster race, and at the same time increased their consumer gas load over 100%.

They are using users for their best leads, offering small premiums when the deal is closed, such as a set of dishes and aluminum ware. These quota buster races have given the salesmen suitable fodder for closing deals as well as pepping up

their own selling enthusiasm.

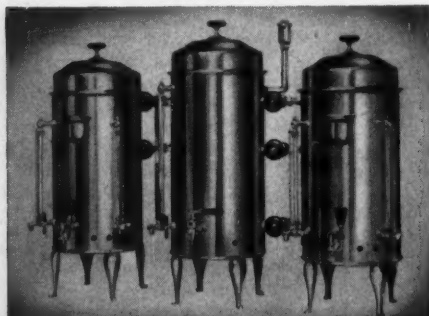
Cooking schools have also been very successful in interesting people in buying bottled gas. These schools have been held in cooperation with a national firm that sells shortening and have influenced at least 25% of the sales closed.

The advertising, cooking schools and promotion work during the Winter builds up an acceptance that carries through the summer months, which as a rule would be considered slow months in that area.

In conducting cooking schools the company furnishes the appliances,

BUILDING YOUR LP GAS LOAD

• Don't overlook the big consumers of your LP gas. You'll find them in the food service market. Live-wire dealers are step-



S. BLICKMAN, INC.

Manufacturers of Food Service Equipment
WEEHAWKEN, N. J.

ping up their gas loads by selling Blickman Food Service Equipment to all types of commercial cooking and food-serving establishments. Specially designed for use with butane-propane, Blickman equipment makes your LP gas sales grow. At the same time, it gives your customers years of trouble-free, low-cost operation. . . . Send now for catalogs showing our complete line of nationally known LP gas sales builders.

**An Outstanding Gas Load Builder —
Blickman Stainless Steel Coffee Urn Battery**

We would like to increase our LPG sales with your food-service equipment. Please send catalogs showing complete line including Coffee Urns, Steam Tables, Luncheonettes, etc.

Name.....
Address.....
City.....State.....

Check



AMERICAN

for

BETTER QUALITY

American takes pride in boasting of better quality Butane-Propane Storage Tanks. Check their actual performance records before you buy. No obligation whatever.

AMERICAN PIPE & STEEL CORP.

Manufacturers and Distributors
Alhambra California

Control

PROPANE-BUTANE
CYLINDERS

THIS POSITIVE WAY—

KEROTEST

PROPANE-

BUTANE

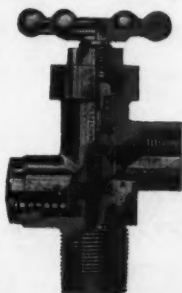
CYLINDER VALVES are:

- **DIAPHRAGM PACKLESS**—require least maintenance.
- **SAFE**—automatic safety-vent releases only excess pressures.

Write for Catalog

KEROTEST

KEROTEST MANUFACTURING COMPANY
PITTSBURGH PA



MORE WARM FRIENDS with THIS HOT NUMBER!



The SECURITY

Propane-Butane GAS

Automatic Water Heater

Faster Profits!

Easier Profits!

Greater Profits!

● A fast-selling profit maker—the Security line of Propane and Butane gas Automatic Water Heaters are **quality built** from top to bottom—inside and out. Made in various capacities—completely insulated with "fiberglass"—economical to operate, efficient, dependable in every way! Beautifully enameled—combining "eye-appeal" and "heavy duty production". Backed by 36 years of manufacturing and pioneering in top quality gas appliances!

Write for Illustrative Literature and Prices today!

Security Mfg. Co.

Kansas City, Missouri



SECURITY GAS-FIRED PRODUCTS



The "Long-Life" LINE

MARCH-1941

119

and to stimulate interest gives away the range that is used, and other prizes. "We have obtained splendid results from these schools," explained F. D. Wills, president.

Twenty-four hour service is given without cost to the customer, because Mr. Wills believes that it reacts in customer good will and is a valuable asset. "When we started our drive, we soon found that on account of the service rendered our customers since 1934, we had a most valuable asset in customer good will," Mr. Wills stated. "This has been an important factor in our business, and we have used it in every way possible.

"We started the year 1940 with something to shoot at. We were entered in the quota buster race and

when salesmen have something to shoot at, as a rule they get more game. Our whole organization became very much interested in the honor and glory angle of the proposition.

"The company is particularly free from the evil of repossessions, having had only three in the last two years, which we attribute to good selling and satisfied customers. We don't canvas people working on small salaries. The customer we sell is better than the average and can afford to pay for the service. We never loose anything to electrical competition."

Trade-ins are mostly on kerosene stoves, and the company junks most of them. Those in good condition are fixed up and resold through the

LIQUEFIED PETROLEUM GAS ASSOCIATION, INC.

MEMBERS AND FRIENDS:

May we take this opportunity of expressing our best wishes to the Annual Convention of this Association for its continued success. As a manufacturer of a complete line of Liquefied Petroleum Gas Heating Equipment, from bathroom heaters to floor furnaces, we are proud to be a part of this outstanding organization.

Peerless Manufacturing Corporation has an exhibit in Booth No. 11, and we welcome visitors.

Yours sincerely,

F. W. CARTER, President.

... A FEW OF MANY OUTSTANDING PRODUCTS ...



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PEERLESS MANUFACTURING CORPORATION

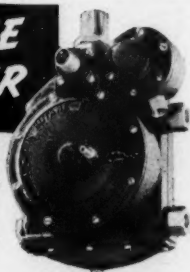
LOUISVILLE, KENTUCKY

THE F. & E. MANUFACTURING COMPANY presents its F. & E. melting furnaces and torches, the 20th century equipment for the modern plumbers and power companies. These fast and efficient non-clogging furnaces using Propane or Butane as a fuel thereby eliminating pumping, priming, pre-heating, clogged coils and permitting absolute flame control have been used on a majority of the National Defense Projects on the Pacific Coast. Propane and Butane distributors write to F. & E. Manufacturing Company concerning our mail advertising campaign in conjunction with the dealer and for discounts on our complete line of fast and efficient burners for all purposes. Remember, the eventual user will not only be a good liquefied gas customer but will thank you for introducing him to this modern time saving equipment.

F & E MANUFACTURING CO.
P. O. Box "D", Centerville, California

The BUTANE CONVERTER

*That's
Outstandingly
Superior*



The Dickinson Butane Carburetor, unlike ordinary converters, is a compactly designed, trouble-free unit—completely self-contained. By means of Dickinson's "unique" vaporizing principle—Butane is efficiently converted from its liquid to a fully dry gasified state.

For Converting
Gasoline-Operated
TRUCKS
TRACTORS
BUSES &
POWER UNITS
to Butane

**WRITE TODAY
FOR
FULL DETAILS**

DICKINSON
BUTANE CARBURETOR
The Superior Converter for A Super Fuel

Manufactured & Distributed by **PENINSULA BURNER & OIL CO.**
1739 Leslie Street, San Mateo, California

MARCH - 1941

NEW PROFITS in COMBINATION RANGES

2 OVENS—COAL, WOOD, GAS



THE HIAWATHA

THIS great combination range gives you an opportunity for *added sales and profits!* Burns gas and coal or wood. With two complete sections, it is actually two ranges in one! Remarkable appeal in rural and suburban markets.

GAS RANGES

Round Oak also offers a complete line of gas ranges to meet every need. All are factory built and tested for any bottled gas specified. A profitable, fast-selling line. Send coupon for facts.



*Oneonta, Round Oak's
newest gas range.*



ROUND OAK

of Dowagiac, Mich.

**STOVES • RANGES • FURNACES • OIL
BURNERS • AIR CONDITIONERS • STOKERS**

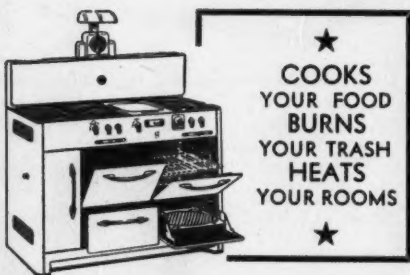
Round Oak Co., Dowagiac, Mich. Dept. BP-3
Send me the facts on Round Oak ranges today!

Name

Address

City State

THERE'S A WEDGEWOOD TO FIT EVERY NEED AND PURSE



A Wide Selection of

WEDGEWOOD L.P.G. RANGES

- 5 Kitchen Heater Models
- 3 Circulating Heater Models
- 10 Standard Cooking Models

WEDGEWOOD

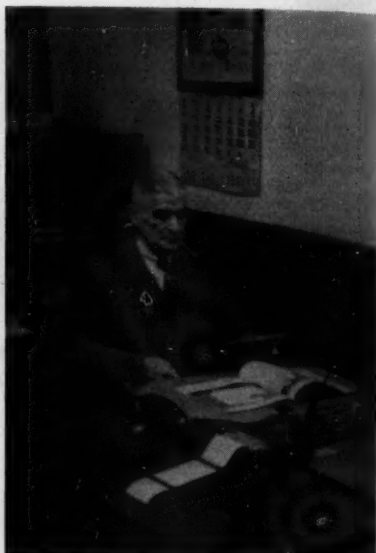
THE MODERN RANGE

James Graham Mfg. Co.

Los Angeles, San Francisco, Newark
California • Portland, Oregon

classified want ad sections of the daily papers.

Beginning in 1941 each salesman has two stoves and a demonstrator on a truck. They leave a job in the home three days. No charge is made for gas consumed. If the customer is satisfied, the sale is com-



F. D. Wills, president, Gas Engineering Co., Daytona Beach, Fla.

pleted. They are using the small stove as a demonstrator, because it is light and can be handled easily. So far, less than 10% of their demonstrations have been removed, but good judgment has been used.

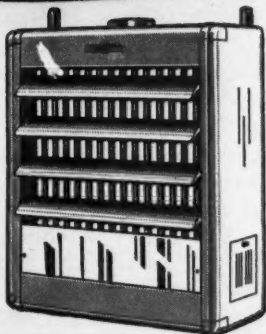
F. D. Wills is president and general manager; F. T. Wills, his son, is in charge of the office, while David H. Wills is in charge of service. Branches are maintained at DeLand, New Smyrna, and St. Augustine.

HUMPHREY

Quality Appliances for
BUTANE · PROPANE

Gas Unit Heaters

Units rating from 65,000 to 400,000 B.t.u. per hour help you sell gas for heating industrial and commercial buildings. Send for complete information.



GENERAL GAS LIGHT CO.
KALAMAZOO, MICHIGAN

McNAMAR

Tanks

- TRUCK TANKS
- TRANSPORTS
- SKID TANKS
- STORAGE TANKS
- UNDERGROUND SYSTEMS

All tanks ASME U-69, inspected by Ocean Accident & Guarantee Corp., Ltd.

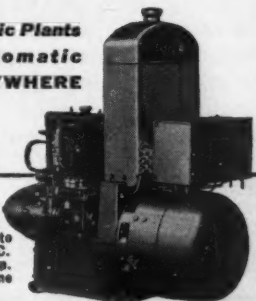
McNAMAR
BOILER AND TANK COMPANY

Tulsa, Oklahoma Salem, Illinois

DEALERS!

SALES OPPORTUNITY! Dealer Franchise Available!

Kohler Electric Plants
supply automatic
current ANYWHERE



1500 watts—
110-volt A.C.
Others, 800 up to
10,000 watts A.C.
or D.C. \$235 up.
Operate on butane
or propane.

FULLY automatic — self-starting, self-stopping — easily installed — sturdy, compact, quiet, efficient. Ample current for lights, pump, radio, small tools. In use at camps, on farms, ranches, on shipboard—at many points beyond regular power lines. Also essential for emergency service at hospitals, theaters, etc., when city current fails. Many styles, sizes, prices. *Investigate—*



KOHLER OF KOHLER
ELECTRIC PLANTS
Planned Plumbing and Heating
Kohler Co. Dept. BP-3, Kohler, Wis.
Please send facts about Kohler
Plants and dealership.

Name _____

Address _____

Butane Stands By at "KTAR"

BUTANE gas stands by, ready for any power demands, at radio station KTAR, newly built \$150,000 plant at Phoenix, Ariz. This is a 5000-watt station and incorporates the latest improvements known to radio technicians.

While the plant is usually operated by electric power, the danger of service interruptions due to storms and other emergencies, compels the operators to provide an auxiliary fuel that can be depended upon to fill a breach upon instant need.

So butane awaits its call to run

the motor that generates the power for transmitting purposes. There is a 37½ Kva United States generator set propelled by an 85 hp., 6-cylinder Continental generator and is so arranged that the motor automatically starts and picks up the complete load within five seconds after the time of failure of power lines.

The motor is equipped with an Ensign carburetor and liquid line running in through the plant to the heat exchanger and, in fact, a typical stationary engine butane-operated motor. A vapor line also

I. C. C. TANKS RE-TESTED

Certificates supplied to Meet I.C.C. Requirements

- Many cylinders are now due for testing on the required 5-year test. The present emphasis on SAFETY makes it imperative to re-test them now.
- We are in a position to make all required tests on both large and small tanks and to supply you with the certificates required by the Interstate Commerce Commission. All makes carefully handled. No water introduced into cylinders.
- We have had 5 years' experience with all makes of I.C.C. containers.

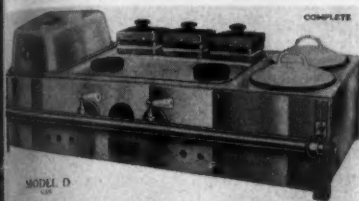
Details and prices furnished on request.

IMPERIAL GAS COMPANY

4212 South Broadway

Los Angeles, California

Fast Sales!



MEXIHOT BARBECUE HAMBURGER MACHINES

Thousands of installations in drug stores, tap rooms, roadside stands, cafes and other places that serve lunches have brought big repeat business. Low price means quick sale. Above model (M.S.), other sizes in proportion. Write for distributorship at once.

Department B8

DICKERSON MANUFACTURING CO.
Springfield, Missouri

REVOLUTION!

YESSIR, THERE'S REVOLUTION IN
THE BUTANE GAS INDUSTRY

NATIONAL
Thermo-Syphon
SYSTEM

IS TAKING THE COUNTRY
BY STORM!

This premium, patented system, utilizing ground heat only, has conquered that bug-a-boo of butane—the separation of propane from butane and the excessive loss of ground heat.

"CIRCULATION BY PERCOLATION"

Exclusive territories available to responsible dealers

National Butane Gas Co.
MEMPHIS, TENNESSEE

They All Say

ALGAS!

**TRUCKERS
RANCHERS
MINERS
CONTRACTORS
BUS & RAIL COs.
RESORTS**

Write for their enthusiastic recommendations today! See how ALGAS Butane-Propane Carburetion can save you money on engine maintenance, fuel and oil.



American Liquid Gas Corp.

1109 SANTA FE AVENUE
LOS ANGELES, CALIF.

MARCH-1941

125

ARMSTRONG HEATERS

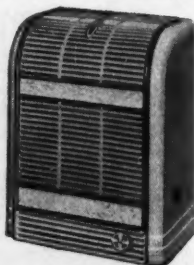
The 4 - Star Line

- ★ QUALITY
- ★ EYE APPEAL
- ★ LOW PRICE
- ★ REDUCED SERVICE CALLS

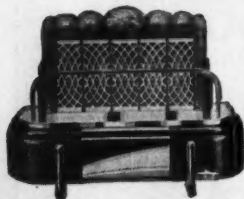
Four reasons why dealers are finding Armstrong Heaters such big sellers and such good profit makers.

900 Radiant Circulator

A real beauty in design and finish. An exclusive Armstrong feature is a clay heating element that produces both radiant and circulating heat. No gas odors. Finished in rich brown porcelain enamel and non-tarnishable chrome. 3 sizes, 14,000 18,000 and 28,000 B.T.U. A.G.A. approval.



790 Radiant Heater



20,000 and 24,000 B.T.U. A. G. A. approval.

A popular seller. Body finished in brown vitreous enamel with heavy chrome hearth, front panel, dress guards and tubular legs. Glazed backwall is light tan shaded with brown. Light faced radiants harmonize with body. 2 sizes, A. G. A. approval.

11 DIFFERENT STYLES

In the complete Armstrong line, there are 11 styles especially designed for liquefied petroleum gases—every one a big value—sized from 12,000 to 30,000 B.T.U. Finishes harmonize with any home or office surroundings.

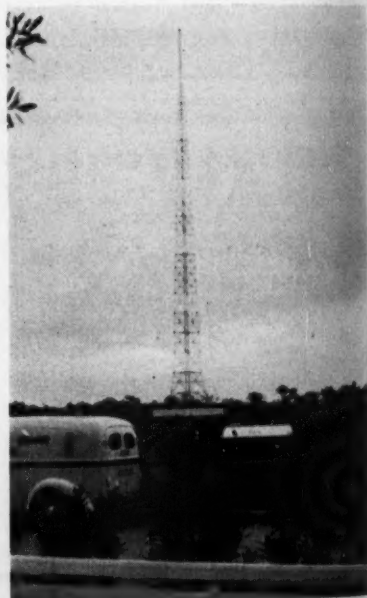
Send for illustrated literature and attractive dealer discounts. Address Dept. BP.

ARMSTRONG PRODUCTS CORP.

Quality Appliances Since 1899
HUNTINGTON, W. VA.

runs from the tank to the furnace which provides the heat.

While the engine may not often be required to take over the responsibility of furnishing electricity for this operation, yet it must be ready to do so in less than five seconds from the time of the power failure. If for any reason the electricity should be shut off, the dead line would automatically release a switch which connects with the starter on the engine which is driven by storage batteries. In actual test, the starter clicks on instantly and the motor picks up the load in less than three seconds. Twice a day the power is shut off

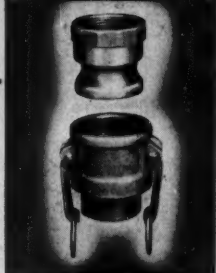


A view of the transmitting tower of Station KTAR, Phoenix, Ariz. Notice the butane tank, which supplies the station's auxiliary power.

BUTANE-PROPANE News

EVER-TITE

QUICK COUPLING UNITS



Tight Connections! No Threads!
SPEED — SAFETY — ECONOMY

Ever-Tite Couplings have proven invaluable wherever connections are made—at bulk plants, on tank cars, for truck deliveries and on storage tanks. They offer years of trouble-free service and are designed for pressures to 3000 lbs. in sizes from 1/4 in. to 8 in.

Write for full information

EVER-TITE COUPLING CO.

254 West 54th St.

New York, N. Y.

PACKING



For LP Gas Pumps

*One pound packs three
average rotary pumps*

COSTS \$3.00 PER POUND

Self-Lubricating — Non-Soluble

Size "B" Fits All Rotary Truck Pumps

Special—This 6"
Flexible Packing Hook,
\$1.00. Get out the old
packing without danger
of blowing.

Corken Pump & Machinery Co.

220 E. Grand

Oklahoma City

Quick on the
"DRAW"
 and
ACCURATE, Too!



SMITH BU-40 METER, capacity 50 g.p.m. can be supplied with horizontal re-set counter; 6" or 10" vertical dial; horizontal Set-Stop counter with or without ticket printer. MASTER BU-40 trimmed with corrosion-resisting alloys for measuring where corrosion problems are encountered.

Smith BU-40 Meters, built for measuring butane and other liquefied petroleum gases, do everything that any meter can do—and do the job, we believe, a little better than any other meters made for this service. Here's why . . .

1—Built on the rotary principle developed by Smith Meter Co. which has proved itself so efficient that it has revolutionized the meter industry.
2—Fast—faster delivery, size for size, than any other meter.

3—Accurate—Smith rotary principle combines speed and accuracy not found in any other meters. Send for Bulletin No. 123, which gives details.

SMITH METER COMPANY

SUBSIDIARY OF A. O. SMITH CORPORATION
 Factories at Los Angeles and Milwaukee

Sales offices at New York, Chicago, Houston, Los Angeles, Local stocks at convenient points. Local agents in all principal cities.

MARCH 1941

to test the standby plant and it has always functioned perfectly and promptly, well within five seconds.

The accompanying picture shows only one of the towers which is 400 ft. high and is operated in connection with a 300 ft. reflector tower and is known as the shunt directional antenna system. The towers are connected only by underground wires, there being a regular network of thousands of feet of wire under the ground between the transmitters and the radio station. No connection at all exists aboveground between the transmitter tower and the reflector tower.

Fuel for this installation is furnished by Butane Corporation, Phoenix, State distributors in Arizona for Shell butane.

Morrison Hardware Installs Meters in Geary, Okla.

New and improved butane gas service for Geary, Okla., along with a price reduction, was announced recently by the Morrison Hardware.

The firm, which has invested heavily in equipment in the last two years to provide butane service to the city which has no natural gas, recently acquired a 2000-gallon tank truck with a meter, making possible the delivery of larger quantities of gas to customers throughout a wide area.

Ten new underground butane tanks were unloaded by the firm the latter part of January for distribution.

A new metered service has been announced by the firm whereby customers do not have to invest in tanks, which are installed by the dealer and gas sold to the customer through a meter, just like natural gas.

SEE

WELBILT

GAS RANGES AT THE SHOW

BOOTH 14, PALMER HOUSE, CHICAGO

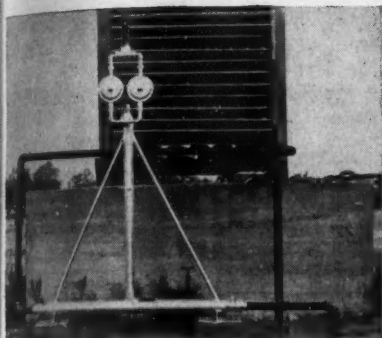
A WRITTEN
GUARANTEE
with
every
range



APPROVED FOR
Liquefied
Petroleum
Gas



WORLD'S BIGGEST SELLING POPULAR PRICED RANGE
FOR 1941 CATALOGUE, Write Welbilt Appliance Corp., Maspeth, L.I., N.Y.



J. & S. BUTANE VAPORIZER

For use on all industrial installations where the connected load exceeds 200,000 B.T.U. per hour, such as small communities, schools, tourist camps, cotton gins, feed mills, dehydrating plants and as standby units wherever power or heat is used.

Easy to install. Simple to adjust. Automatic in operation. Economical in performance. Built to use waste heat of any kind, such as exhaust gas, hot air, steam, or hot water. Built-in safety feature which prevents liquid from reaching the appliances or engines.

For further information, write, wire, or call

J. & S. CARBURETOR CO.

Box 5825 2634 N. Beekley Dallas, Texas

"HEAT LIKE SUNSHINE"

THE VITARAY

Line Consisting of
**RADIANT, FIREPLACE
INSERTS, WALL INSERTS,
AND CIRCULATING HEATERS**

are especially designed for and

A. G. A. APPROVED

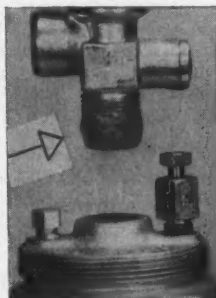
on Liquefied Petroleum Gases

Write for Complete
Literature and Prices.

**THE QUAD STOVE MFG. CO.
COLUMBUS, OHIO**

NEW!

BU-SEAL

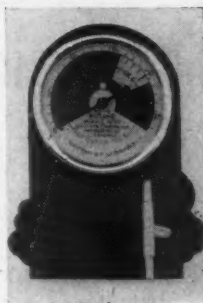


● Here, at last, is a sealing compound that will seal tank and cylinder valves for LPG use. Bu-Seal sets without permanent hardening; valves once set, may be removed (without damage); is not soluble in water, oil or gas.

BUTANE

Mileage Meter

● Increase your mileage on any engine 10% with this inexpensive, easy to install, mileage meter. Meter is constructed so driver can tell instantly whether or not engine is being driven at maximum efficiency. It pays for itself.



We carry a complete stock of Pressed Steel I.C.C. Cylinders for immediate delivery, also tank fittings, regulators, pigtail, gauges.

ELECTRIC AND CARBURETOR ENGINEERING CO.

"Pioneer of the Butane Industry"

2323 E. 9th St.

Los Angeles

Headquarters Chosen For Southern Section Meeting

The next meeting of the Southern Section of the Liquefied Petroleum Gas Association will be held in New Orleans on April 28-29 and the headquarters will be the Roosevelt Hotel, according to R. L. Edwards, Sectional secretary.

Chairman Louis Abramson and Mr. Edwards are preparing a program of timely subjects for discussion before the meeting.

W. P. Ford Has New Territory For Standard Gas Equipment

The Standard Gas Equipment Corp. has announced the appointment of Wendell P. Ford to represent it on domestic range sales in Western Pennsylvania, Eastern Ohio and West Virginia.

Mr. Ford replaces Walter Sealand who covered this territory for

many years, and who has retired from active business and is spending the Winter in Florida.

Mr. Ford has been selling gas appliances, wholesale and retail, for 20 years. For the past year he has been covering North and South Carolina for the Standard Gas Equipment Corp.

New Men Added to Roper Field Staff

Claude Vollmayer and Arthur Broderick have recently joined the Geo. D. Roper Corp. sales organization and are now actively engaged in their respective territories.

Mr. Vollmayer will operate in New York state along with A. F. Jenkins. Mr. Broderick will work in New Jersey with Frank France and Roper Eastern Manager W. J. Foster.

Also, two new Roper warehouses have been opened, one in Houston, Texas, and one in Jersey City, N. J.

WE SPECIALIZE IN YOUR LPG EQUIPMENT

Hydro-Gas Systems
Smith Liquid Meters
Butane-Propane Pumps
Ransome-Forster Burner
Equipment
Skellyfuel (Butane or
Propane Gas)

Southern Butane-Propane
Systems
Butane or Propane Truck Tanks
Plain, semi-streamlined
or fully streamlined
Scaife Butane-Propane Cylinders

EXCLUSIVE SALES AGENTS FOR:

General Steel Tank Co.
Birmingham, Alabama

Arkansas Foundry Co.
Little Rock, Arkansas

WRITE, WIRE OR PHONE OUR NEAREST OFFICE

310 Gazette Bldg.
Little Rock, Ark.

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Birmingham, Ala.

SOUTHERN GAS & EQUIPMENT CO.

"Serving Arkansas, Louisiana, Missouri and the Southeast"

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N. J.

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*For Safety
and Economy*

ETHYL MERCAPTAN

—Purified—

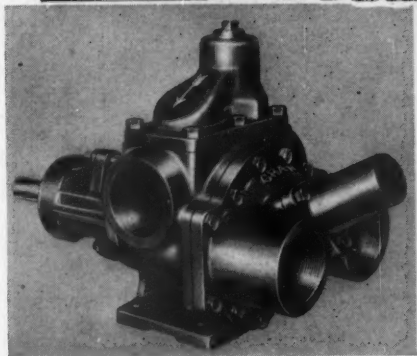
The **ACCEPTED**
standard
odorant
for liquefied
petroleum
gases.

**MALLINCKRODT
CHEMICAL WORKS**

ST. LOUIS

NEW YORK

2 YEARS
without
Re-packing



Packing is a headache with most butane pumps—but a Granberg Model DEET has been running two years in the Wichita Falls, Texas, plant of Western Farm Gas Co. without re-packing! And it's still going strong. Read what they say:

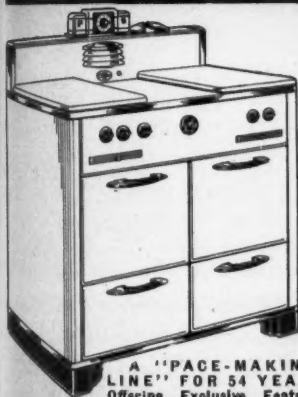
"We have had one of your 2" DEET butane pumps in service about two years and it has just worked fine, and, believe it or not, we have never had to repack the pump during this period."

Granco Butane Pumps can give you, too, the same efficient, trouble-free service they are giving this user. Write for complete information and illustrated catalog sheet TODAY!

FOR EXTRA GOOD PUMPING EQUIPMENT
Granco
GRANBERG EQUIPMENT, INC.
1308 67TH STREET,
OAKLAND, CALIF.

STOCKS AND SERVICE
IN PRINCIPAL CITIES

CROWN GAS RANGES for LIQUEFIED GAS



A "PACE-MAKING
LINE" FOR 54 YEARS
Offering Exclusive Features
—Distinctive Styling—Sturdy

Construction. When at the LPGA Convention,
see our display—1464 Merchandise Mart.

CROWN STOVE WORKS

4631 W. 12th PLACE, CHICAGO

Manufacturers of BUFFET and DIVIDED TOP GAS RANGES

MARCH-1941

131



At Your Service..

WARREN'S

**Large Fleet of
Tank Cars and
Storage and Loading
Facilities for
Customer's Trucks**

Warren not only has the constant output of high quality Butane and Propane from 18 modern Natural Gasoline plants in seven states . . . we offer the most complete shipping, storage and loading facilities for dependable, speedy service to our customers.

Warren Products are scientifically produced by experienced operators to meet the specific requirements of modern industrial and domestic heating and power equipment.

**PARTNERS--NOT COMPETITORS
OF OUR CUSTOMERS**

BUY BETTER BUTANE

Wire or write

**WARREN
PETROLEUM CORP.**

**Manufacturers and Wholesalers
Tulsa, Okla.**

Fire Marshal May Enforce Oklahoma LP-Gas Laws

A bill was introduced in the House of the Oklahoma legislature, Jan. 28, by Representative Claud Thompson, of Antlers, Okla., which proposes to repeal the present law which authorizes the state Corporation Commission to make rules and regulations in the interest of greater safety in handling liquefied petroleum gases.

It is proposed to replace the present law, under which the Corporation Commission already has promulgated and enforced safety regulations, with a new law to transfer these regulatory functions to the state fire marshal's office and provide an adequate appropriation for inspection and enforcement.

Under the present law the Commission has no funds for inspection or enforcement.

Northwest Awakening To LP-Gas Merits

Geo. C. Pitchie, salesman for Pacific Gas Radiator Co., Huntington Park, Calif., is now on an extended sales trip through the Northwest. Mr. Pitchie is calling on LP-Gas dealers and will make a survey of the area for his company.

Sales of butane and propane gas and equipment in Oregon and Washington are expanding rapidly, according to reports.

F & E Manufacturing Co. Plans National Sales Campaign

The F & E Manufacturing Co., whose factory is now located at Centerville, Calif., is planning upon a National sales campaign to more widely distribute information concerning its melting furnaces and torches, according to an announcement from Joe Mason, manager of the company.

The CARTER OIL COMPANY

Tulsa, Oklahoma
**Manufacturers
and
Suppliers**

of dehydrated
PROPANE and BUTANE

for the distributing and industrial
trade. Shipping points: Seminole,
Oklahoma; Stonewall, Oklahoma, and
St. Elmo, Illinois.

Address inquiries to:
**Marketing Department
Room 928, National Bank
of Tulsa Building
Tulsa, Oklahoma**

AUTOMATIC GAS SHUT-OFF CONTROL Thermocouple Type

General Controls Thermovalve MR-2

WITH FLEXIBLE LEAD CONNECTIONS



100% Positive Shut-Off for Water Heaters Floor Furnaces, Etc.

Pilot flame applied to thermocouple element provides all necessary current for valve operation. Valve is of manual reset, straight-through gas type, automatically closing upon pilot flame failure. Standard thermocouple length 30". Valve sizes $\frac{3}{8}$ " to $1\frac{1}{2}$ ".

Write for 1941 Complete Catalog

GENERAL CONTROLS
450 E. Ohio St.
Chicago, Ill.

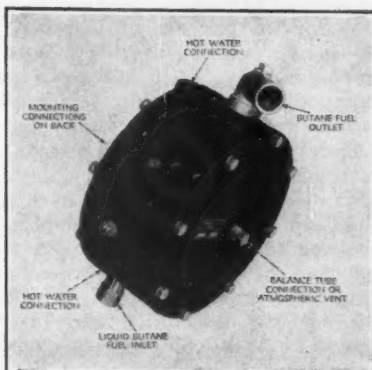


267 5th Avenue
New York City

Distributors and Stocks in all Principal Cities

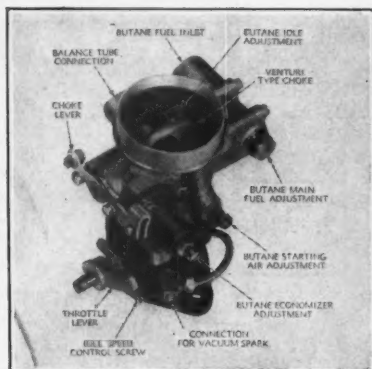
PYRAMID

Butane Carburetion EQUIPMENT



VAPORIZER-REGULATOR

Pyramid catalogue, Form 100, will give you complete information on this dependable butane carburetion equipment. Tested and approved wherever butane is used, Pyramid equipment will bring you sales and satisfaction. Write today.



BUTANE CARBURETOR

PYRAMID EQUIPMENT CO.

Box 704

Huntington Park, Calif.

New Dealers' Association Formed in Southwest

An enthusiastic group of appliance dealers, LP-Gas distributors, and manufacturers' representatives met in the Crystal Ballroom of the Herring Hotel, Amarillo, Texas, Jan. 27, 1941 for the purpose of forming an LP-Gas Association serving members of the industry in the West Texas Panhandle, New Mexico, Colorado, and Western Oklahoma areas.

Twenty-five firms were represented at this meeting and after a round table discussion of the vital need for such an organization, Temporary Chairman Feris Ruggles took a rising vote of the 40 men attending, which was unanimously in favor of forming the association and taking immediate steps to become a member of the National Liquefied Petroleum Gas Association.

Temporary Secretary L. K. Bray

was instructed by the group to contact the National Association and secure the services of their organizer at the earliest possible date, and it was unanimously agreed that each man present would bring two or more prospective members to the next meeting.

Brief talks were made to the group by A. W. Peck, Philgas Division, Phillips Petroleum Co.; E. Naylor, Superior Manufacturing Co.; and Ted Linn, L & H Range Sales Manager.

Group discussion of safety practices and domestic installations closed the session.



O. H. Sooy Wins Skelgas Prize

O. H. Sooy, salesman for C. A. Boruff in Jackson, Ill., was recently awarded first prize for Skelgas sales in his district for the year 1940.

A watch and cash were the award.

METALBESTOS

NON-CORROSIVE

SAFE

EFFICIENT

Gas Vent & Flue Pipe

INSTALLERS OF L.P.G. FIRED APPLIANCES SAVE TIME AND MONEY BY INSTALLING METALBESTOS. No condensation—perfect draft—proper combustion. It does a better job of gas venting and it's simple to install!

GUARANTEE OF
EFFICIENCY, SAFETY
AND DURABILITY



Trade Mark appears
on every length.

THE MARK OF
ORIGINALITY—THE
ENVY OF IMITATORS

APPROVED AND LISTED
BY
UNDERWRITERS' LABORATORIES, INC.

APPROVED BY
PACIFIC COAST
BUILDING OFFICIALS CONFERENCE

FOR FULL INFORMATION, WRITE TO

WILLIAMS-WALLACE COMPANY

160 HOOPER ST.

SAN FRANCISCO, CALIF.

ORIGINATORS OF DOUBLE WALLED - ALUMINUM LINED GAS VENT AND FLUE PIPE

Sell Speed

with a

SPARTAN

A water heater built for today's requirements: speed in recovery (55.9 gals. per hour)—efficient—noiseless—attractive—safe. Every dealer needs the SPARTAN to make his line complete. Write for details.

A.G.A.
Approved



Continental
WATER HEATER CO. LTD.

1637 N. Spring St., Los Angeles

SPARTAN
Automatic
Storage

SPRAGUE METERS

for

PROPANE-BUTANE SERVICE

Write for Particulars

SPRAGUE METER COMPANY

Bridgeport, Conn.
Los Angeles, Calif.
San Francisco, Calif.

QUALITY PRODUCT

PROPANE
BUTANE
OR
MIXTURES

Philgas believes that there is no substitute for a full measure of quality in every gallon of product it produces or sells.

Philgas products are sold on what are probably the most complete and most rigid quality specifications in the liquefied gas industry. YOU can benefit by buying *assured quality* from Philgas.

Philgas
DEPARTMENT

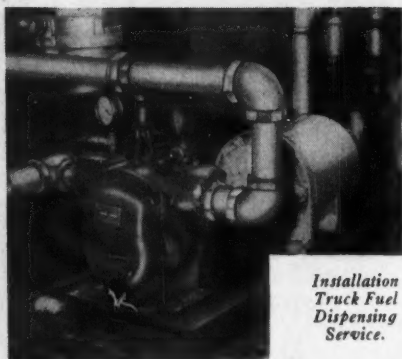
PHILLIPS PETROLEUM COMPANY
GENERAL MOTORS BUILDING
DETROIT, MICHIGAN

NEW YORK
PHILADELPHIA
CHICAGO

MILWAUKEE
ST. LOUIS
AMARILLO

BARTLESVILLE, OKLA.

THE NATION'S LARGEST MARKETER
OF LIQUEFIED PETROLEUM GASES



*Installation
Truck Fuel
Dispensing
Service.*

The **SMITH PUMP** *is a* **BETTER PUMP**

**Made purposely for
BUTANE and PROPANE**

If you have been **DRAFTING** ordinary pumps designed for pumping **ORDINARY** fluids, into your **L. P. G. service**, you cannot afford **NOT** to investigate **SMITH PUMPS**.

SMITH BUTANE-PROPANE PUMPS

STOP the usual 24-hour per day packing box leak loss and attendant fire hazard. **AVOID** the usual excessive wear found in pumps not especially designed for this service.

AVOID the early efficiency losses causing delays, repairs and replacements.

STOP the worry and time losses occasioned by uncertainty of operation.

INSTANTLY develop adequate pressures.

If you **INVESTIGATE** you will **SPECIFY SMITH BUTANE-PROPANE PUMPS**.

Capacities 30 to 120 G.P.M. for tank trucks and loading racks.

SMITH PRECISION PRODUCTS CO.
1135 Mission St., South Pasadena, California

SMITH

BUTANE - PROPANE

PUMPS

Positions Guaranteed Men Entering War Service

Every man who enters military service for Uncle Sam in the present emergency will be guaranteed their old or equal positions with the Butane Corporation, of Phoenix, Ariz., when they are mustered out, stated W. T. Joplin, general manager, at the organization's annual banquet, which this year celebrated the company's fifth one in business.



W. T. JOPLIN

Also, such men will be paid an extra amount, up to as much as two months' salary, based upon the length of time they have been with the firm.

The banquet was the occasion for presentation of bonus checks for 1940, which was declared to have been the best year in the company's history.



Western Metal Exposition Meets in Los Angeles May 19-23

Particular attention will be paid by speakers to metals used in production and delivery of gas, when these authorities appear on the program of the Western Metal Congress and Metal Exposition May 19-23 in Los Angeles.

The meeting will be presented by the American Society for Metals in the Biltmore hotel and Pan-Pacific Auditorium, in co-operation with 19 other technical societies.

W. H. Eisenman, of Cleveland, secretary of the metal society, already is in Los Angeles, with offices at the auditorium, to complete arrangements.

HANSON BUTANE TANKS

C.I.A.C. A.P.I.-A.S.M.E. A.S.M.E.



Fleet of 67 Trucks
CITY OF LOS ANGELES
Dept. of Public Works
Successfully Operating With

HANSON REDHEAD
Butane Carburetors

ROY E. HANSON

Manufacturing Mechanical Engineer
1924 Compton Ave. Los Angeles

LPG GAS EQUIPMENT

Distributed for
BASTIAN-BLESSING CO.
L. C. RONEY, INC.
HACKNEY ICC CYLINDERS

at Dallas, Texas
GAS EQUIPMENT CO., INC.
2620 S. Ervay St.

at Atlanta, Ga.
GAS EQUIPMENT SUPPLY CO.
1157 W. Peachtree St.



Here's a Proven Way
to Build Volume on

LIQUEFIED PETROLEUM GAS!



Tell your poultrymen about the A. R. WOOD "Radiant" GAS BROODER. Tell them about its safety . . . its economy . . . its dependability . . . its convenience . . . its unsurpassed record for brooding efficiency.

This brooders is built especially for Liquefied Petroleum Gas. One brooder sells another. Get them started in your territory and watch your gas sales boom.

WRITE FOR FOLDER which describes the Brooder in detail and shows you how and why it is a boon for poultryman and gas dealer at the same time.

A. R. WOOD MFG. CO.

Santa Cruz, Calif. Luverne, Minn.
Portland, Maine Whippany, N. J.

H. W. Harts New Vice President Of Warren Petroleum Co.

H. W. Harts has been named vice president of the Warren Petroleum Co., Tulsa, Okla., according to January announcements from company officials.

Mr. Harts, a graduate of the University of Illinois, has been with the Warren Petroleum Co. since 1935. In that year the company purchased the natural gasoline properties of Amerada Petroleum Corp., with whom Mr. Harts had been associated for 14 years.

Wendland Mfg. Co. Acquires Flash-O-Gas Sales Rights

H. G. Wendland, proprietor of the Wendland Manufacturing Co., San Antonio, Texas, manufacturer of Flash-O-Gas Systems, announces that he has purchased the National sales

rights for Flash-O-Gas Systems from the Flash-O-Gas Co., and will henceforth control all distribution of the systems throughout the United States.

Flash-O-Gas systems are based upon a principle of liquid withdrawal or flash vaporization.

J. Rose & Co., Inc., Appoint L. M. Taylor & Co. Texas Dealers

Arrangements have been made with L. M. Taylor & Co., 2112 North Lamarr, Dallas, Texas, to handle the entire state of Texas for J. Rose and Co., Inc., gas range manufacturers of New York City according to William Rose, vice president of the company.

The new distributors will carry a warehouse stock of ranges for natural and liquefied petroleum gases and will be able to make immediate deliveries to dealers.



HIGHLIGHTS!

FOR YOUR 1941 HEATER CAMPAIGN

WRITE . . PHONE . . WIRE now for your BRILLIANT FIRE franchise. Insure the success of your 1941 Season with this fast-selling, profit making line of modern heating appliances. New designs . . novel features. Selling and finance plan provided. Pre-season low prices with fall billing now offered franchised dealers. Write for new G-41 Catalog.

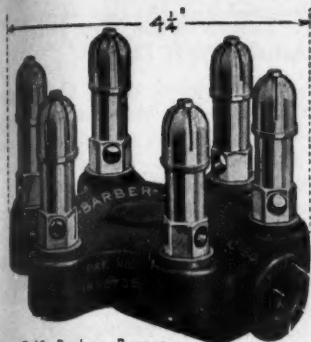
Visit the BRILLIANT FIRE Display
February 24th and 25th, Chicago
LIQUEFIED PETROLEUM GAS ASSOC.
Convention, Palmer House (Booth 29)

Since 1846
**BRILLIANT
FIRE**



Gas Heaters

NATURAL • MFRD • BUTANE • PROPANE
THE OHIO FOUNDRY & MFG. COMPANY
STEUBENVILLE ~ ~ ~ OHIO, U. S. A.



No. C-60 Barber Burner

BARBER APPLIANCE BURNERS

For every appliance, there is a Barber Burner unit with proper jets to suit the combustion requirements of Butane or Propane Gas, and to fit the appliance. Eliminate servicing and back firing. Every distributor of these fuels, as well as appliance builders, can best serve their customers by recommending genuine Barber Burners. Submit your burner problems to us. Write for Catalog showing complete Barber line.

THE BARBER GAS BURNER CO.
1704 Superior Ave. Cleveland, Ohio

In the MIDDLEWEST

Consider

PETER FISH INDUSTRIES

Incorporated

for

CENTURY CARBURETORS
LEONARD SPARK PLUGS
SELWYN FITTINGS
F & E TORCHES
MARVEL OILERS
TOKHEIM DISPENSERS
LP-GAS TRUCK TANKS

plus

Engineering Service

612 N. MICHIGAN AVE.
CHICAGO

Write for dealership



SKELLYFUEL

(BUTANE AND PROPANE)

● answers the request for a more economical heavy-duty motor fuel that speeds up deliveries and lowers maintenance cost. This is not merely our claim for Skellyfuel. It is proved fact. The vast resources, production, refining, and distribution facilities of the Skelly Oil Company positively assure unfailing supply of unvarying quality, and our own experience in distributing and retailing Skellyfuel places us in a position to give you the benefit of seasoned counsel in solving your problems of distribution.

For details, phone,
write, or wire

SKELLY OIL COMPANY

TULSA, OKLAHOMA



FOR
Smooth
SAILING

SPECIFY

ANCHORGAS

There is "smooth sailing" ahead for Anchorgas customers. An adequate supply assures you of immediate shipment from one of our several plants in Kansas, Oklahoma, Texas, and Louisiana.

ANCHORGAS is a high quality fuel sold with complete confidence.

ANCHOR is an independent manufacturing and marketing company—never your competitor.

*Write or wire
for quotations*



ANCHOR
PETROLEUM COMPANY
Atlas Life Bldg. Tulsa, Okla.

R. L. Tatem Kills Big Buck On Adirondack Hunt

What is claimed to be the biggest buck killed in the Adirondack mountains—weighing 227 pounds—was shot last Fall by R. L. (Bob) Tatem, of the Roberts & Mander Stove Co., Hatboro, Pa. It was a 10-point deer and was killed at North Hudson, N. Y., 15 miles above Schroon Lake. The next largest deer killed weighed 187 pounds.

Others in the hunting party were L. B. Pettit, assistant manager of the Philgas bulk station in Albany, N. Y.; Joe Gassaway and Chet Brown, both servicemen for the same company; William Bryan, Jr., and Judge William Bryam, the last named being host to the party at his hunting lodge near North Hudson.



Bob Tatem's mammoth buck and members of the hunting party.

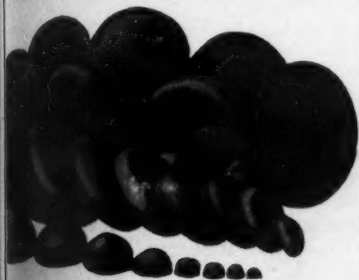
BUTANE-PROPANE News

**GREATEST
NEED**
(for L. P. G. Salesmen)
**NOW
ANSWERED!**

**The
Butane-Propane
PRIMER**

*Expert LPG men wrote
it—dynamically—brief.
\$1 per copy*

LPG INSTITUTE OF LOUISIANA
P. O. BOX 537 LAFAYETTE, LA.



We Make Heads Too!

From our complete, modern shops come the heads used in the manufacture of LP-Gas containers, guaranteeing the best for less—and more rapid service. All standard sizes carried in stock.

Fabrilform Steel Products Co.
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N.G.A.A. Will Meet In Dallas, April 23-25

For the first time in 20 years the Natural Gasoline Association of America will hold its annual convention outside of Tulsa, Okla., having



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recently scheduled its 1941, three-day session, in the Baker hotel, Dallas, Texas, April 23-25, according to Wm. F. Lowe, secretary.

The Association formerly held mid-year meetings in Dallas and Fort Worth but its annual convention remained in Tulsa. Growth of the natural gasoline industry in Texas and Louisiana, however, has greatly extended the activities and interests of the Association and brought the decision to choose a more central location within the industry for its annual conference.

George P. Bunn, Phillips Petroleum Co., Bartlesville, Okla., N.G.A.A. president, recently announced the appointment of the convention program committee, of which T. R. Goebel, Shell Oil Co., Inc., Houston, is chairman. The Technical sessions will be of unusually wide interest with the presentation of conclusions reached by research committees of the Association in studies of test methods for both natural and liquefied gases.

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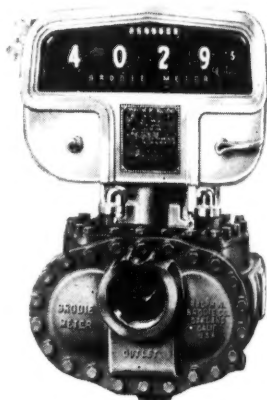
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